

CARPENTER'S GEOGRAPHICAL READER



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CARPENTER'S GEOGRAPHICAL READER

AUSTRALIA, OUR COLONIES, AND
OTHER ISLANDS OF THE SEA

BY

FRANK G. CARPENTER



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Carpenter's Geographical Readers

NORTH AMERICA	60 cents
SOUTH AMERICA	60 cents
EUROPE	70 cents
ASIA	60 cents
AUSTRALIA, OUR COLONIES, AND OTHER ISLANDS OF THE SEA	60 cents
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These Readers are not dry compilations from other books, but
comprise vivid descriptions of the author's personal observations.

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CARPENTER'S OUR COLONIES.

PREFACE

THE purpose of this book is to give the children who read it a living knowledge of Australia and the chief islands of the world, and especially those which have become colonies or dependencies of the United States. Within the past few years our own territories have been extended to the other side of the globe. We have acquired new lands with new climates, resources, and products. We have adopted into our national family millions of people belonging to races different from ours, having different customs and a different civilization. In our far-away lands the whole aspect of nature seems changed, and we seem to be in a new world. This is so not only of Samoa, Hawaii, and the Philippines, but also of Porto Rico and our dependent sister republic of the West Indies, the great island of Cuba.

This book aims to take the children themselves into this new world. In a personally conducted tour through the eyes of the author they travel over it, seeing our brown-skinned cousins of the several colonies as they are at home. They learn about the resources of the various islands, and of their value to the United States. They visit the people on the farms and in the factories. They spend some time in the cities and villages, and they explore the wilds, observing the wonders of plant and animal creation.

A glance at the contents will give some idea of the scope of the tour. Not only our colonies, but also Australia and the chief islands of the world, have been visited. The most impor-

tant parts of the Atlantic, Pacific, and Indian oceans are traversed by the pupils, who are taken on a zigzag trip around the globe and introduced to many strange parts of it usually omitted in books of this nature.

Much of this volume is based upon the personal investigations of the author in the countries described, and many of the illustrations are reproduced from photographs taken by him. This is especially so of those chapters relating to Porto Rico, Samoa, Hawaii, and the Philippines, which have been visited for the purpose of writing this book since they became a part of the United States.

Great care has been taken not only as to the colonies, but also as respects all the islands described, that the descriptions be as accurate and as up to date as possible. The territory is, however, so vast and so varied, covering as it does the whole world, that only the most important places and things can be mentioned, the subjects being chosen with due regard to child interest and at the same time instruction.

These travels are not intended to take the place of the school geographies, but they should be used with them as a supplementary reader. As with the volumes already published describing similar tours in North America, South America, Asia, and Europe, the text-books on geography may be regarded as the skeleton, and this reader as the flesh and blood which will clothe its dry bones and make our colonial possessions and the other islands of the seas a living whole in the minds of the pupils.

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AUSTRALIA, OUR COLONIES, AND OTHER ISLANDS OF THE SEA



I. GENERAL VIEW OF AUSTRALIA

THIS book will describe the tour of a party of boys and girls around the world on the lookout for strange lands and strange peoples. Every child who reads it shall be one of the party. He must forget, for the time, that he is in America and imagine himself with us in those far-away countries.

We are to explore the chief islands of this big round earth. A look at the map will show you what a vast number of them there are and how they are scattered. Some lie on the edge of the broiling Equator, others are close to the ice-clad poles. Some are high islands formed by the peaks of volcanic mountains which have been thrown up out of the sea; others are low islands built up by little coral animals from the bed of the ocean.

There are so many islands that our tour must be carefully planned that we may not miss the principal ones, and even with the best of planning it will be impossible to set foot upon all.

Avoiding the greater land divisions we shall start with

Australia and thence steam on from island to island, going from sea to sea and ocean to ocean until we have encompassed the globe.

Australia is the largest island of all, so large that it is classed with the continents. It is almost twice as large as all the countries of Europe without Russia and the Scandinavian Peninsula, and almost as large as the whole United States without Alaska, so large that we shall have to travel a thousand miles farther than from New York to London and back if we but sail around its coast. From east to west it is longer than the distance from the Hudson River to the Great Salt Lake, and from north to south its width is greater than the distance between Philadelphia and Denver.

This vast body of land as we look at it on the map is shaped somewhat like a great heart, but if we could view it as the sun sees it, we should find it composed of mighty plains tilted up at the edges and sloping towards the center somewhat like an enormous soup plate of irregular shape. At the eastern side we should see a range of mountains making that part of the plate the highest, and in the southeast Mount Kosciusko, the highest mountain of Australia, reaching almost a mile and a half above the sea and looking to us like a knob on the rim of the plate.

This island continent is largely a desert; the chief water-laden winds which come from the Pacific strike the range of mountains along the eastern coast, and the cold air squeezes them dry, so that when they pass over the interior of the continent they have no more water to lose. As a result the eastern slope of the mountains has a good

rainfall, and there we find numerous rivers, the cultivated lands, the large cities, and most of the people. In that part of Australia are located the great dairying and fruit industries. On the table-lands and western plains are some of the greatest sheep and cattle runs in the world. Much of the interior, although dry, is extremely fertile, and is enriched by occasional monsoonal rains. Much of the western plain country, formerly used for grazing purposes, is now profitably employed for wheat production.

Large tracts in the west and southwest are also used for cultivation and pasture, but the middle of the continent over immense areas is a dreary desert. Some of it is as thirsty as Sahara, having vast regions of rock and sand through which we might ride for miles and see nothing but dusty scrub and bushes covered with thorns, where the only water to be found is in salt marshes, brackish lakes, and rock holes.

The Australian continent now belongs to the English. They claim it by right of exploration and settlement, having seized the lands from the black aborigines and driven them back until the natives now hold somewhat the same place that the Indians do in our country.

Australia was the last grand division of the earth to be visited by Europeans. It was discovered by Portuguese, Spanish, and Dutch navigators, but it was not thought to be of any value until Captain James Cook, the great English explorer, made a tour along the east coast. This was about six years before we declared our independence of England. Captain Cook brought back glowing reports of the richness of the country,

and the English at once sent out and took possession of it. The first settlements were devoted to criminals who worked in chains guarded by soldiers; but later on, when it was found that the climate was good and the soil fertile, other people came and the prison settlements were done away with.

By and by colonies were established in the best parts of the country. They grew rapidly, and now there are white people living in all of the habitable regions.

The continent is divided into great states or provinces. There is Western Australia comprising the whole western portion of the country, with Perth as its capital. The state is largely a desert, but is rich in gold and other minerals, and has extensive jarrah forests.

South Australia, with the Northern Territory which belongs to it, takes up the whole central portion. It has rich lands in the mountainous southeastern section and also in the far north, although much between is unfit for cultivation. Its capital is Adelaide on the Torrens River.

The eastern section of the continent is divided into the three states of Victoria, New South Wales, and Queensland. Victoria at the south is very rich in gold and in farm and pasture lands. Its capital is the city of Melbourne, and it has many other large towns. New South Wales, just to the north, is much larger than Victoria and is also exceedingly rich. Its capital is Sydney, the principal port of Australia. Queensland, which takes up the vast country still farther north, includes all northeastern Australia. It is a land of pastures, farms, rich mines, and sugar plantations. Its capital is Brisbane.

Each of these states has its own governor sent out from England, and its own parliament elected by the people, and it is the same with the island of Tasmania just south of Australia. All of the colonies, including Tasmania, are now united as states in the commonwealth of Australia, which, although it practically governs itself, is still subordinate to the mother country, being under a Governor General appointed by the Crown, and forming a part of the great British Empire.

We shall learn about the different states as we travel over them, imagining ourselves first in the city of Sydney ready to start.



2. IN SYDNEY, THE NEW YORK OF AUSTRALIA

BEFORE we begin our exploration of Sydney, let us stop a moment and think where we are. We are away south of the Equator on the other side of the globe. It was winter when we left the United States. It is summer here in Australia. Our watches are all wrong and we must change them if we would not be ever calculating the difference of time, and often turning night into day. Sydney time is fifteen hours ahead of New York time, so that when our friends in the United States are going to bed on Monday night, we shall be sitting down to lunch on Tuesday afternoon. The difference will be less in Western Australia, as it is nearer Greenwich, from which our time is reckoned.

It took us twenty-one days to come from San Francisco to Sydney. The voyage was not wearisome, however, for

the Pacific Ocean was in a quiet mood and the weather was fine all the way. It was a little cold at the start, but the sun grew warmer as we sailed southward. It was so warm and pleasant at Honolulu that we packed away our overcoats, and a few days afterward came out in our summer clothes.

A little later we crossed the Equator, and just two weeks after leaving San Francisco we called at Uncle Sam's little island of Tutuila (too-toō-ē'lā) in the Samoan Group, where it is so warm that many of our brown cousins wear no clothes at all. Still later we reached New Zealand, and we are now at anchor in the harbor of Sydney with all Australia before us.

How beautiful everything seems after our long voyage at sea! The sky is bright blue, the trees and the grass are the greenest of green, and the sunlight is dancing on the waves of the harbor. We seem to be in a winding lake with hundreds of bays, inlets, and creeks. The lake contains many islands; wooded hills rise in some places straight up from the shore, and in others the mainland slopes so gently that a great city has been built upon it.

This is the famed harbor of Sydney, which the Australians claim to be the finest harbor of the world. Its entrance is The Heads, a natural gateway about a mile wide guarded by gigantic rocks as high as the highest church steeple, so protecting the shipping that, no matter how stormy the ocean outside, there are quiet waters within. The harbor is so deep that the largest ocean steamers can sail close up to the land, and its coast line is so long that all the ships of all the world could anchor here and have room to spare.

See that big steamer at the right of our vessel. That is a German ship of ten thousand tons which has come to Sydney for a cargo of wool. Next to it is a French vessel from Marseilles, and farther on are huge steamers from London and Liverpool taking on and putting off goods. There are ships here from China and Japan, ships from the Mediterranean, and from India and Africa, ships from



Circular Quay, Sydney Harbor.

South America, Canada, and the United States, and coasting steamers which do business with Australia and all the islands of the southern Pacific.

The harbor is such that the ships lie at anchor in the very heart of the city, and when we land we are in one of the chief business sections. We send our baggage to the hotel and start out for a walk.

How homelike it is! The buildings remind us of San Francisco, save that they are not quite so tall, few of the

business houses having more than six stories. Many of the best blocks are of sandstone from the quarries near the city. From the sandstone so conveniently obtained, very handsome warehouses and other business establishments are erected.

Notice the streets! They wind about this way and that. They are as crooked as those of Boston, which, it is said, were laid out along cow paths. Sydney has such winding streets that the people of other Australian cities say it was planned by a bullock driver who stood at the harbor and threw boomerangs up the hills and made the streets along the lines of their flight.

Let us look at the roadways as we go through the city. The streets are paved with wooden blocks so fitted together that they seem like wood carpeting. They are so hard and smooth that one horse can haul a load of three tons, and six-ton loads for two horses are not uncommon. The pavements are of eucalyptus, the famous Australian hardwood. The continent has excellent timber, which is so good for pavements and railway ties that it is in great demand in other countries.

The stores have plate glass windows and sometimes galvanized iron awnings out over the street to shield passers-by from the sun. Here is an arcade, a street roofed with glass and walled with stores, which runs through from one side of a block to the other. Such arcades are common in the Australian cities. The people like them, for they can walk from store to store, keeping cool and dry no matter how hot or rainy it is outside.

See the goods in the store windows! The price tags are English, but the figures are in pounds, shillings, and

pence, and we have difficulty in knowing just what they mean. The Australians use English money, and the pound (\$5), the shilling (25 cents), and the penny equal to about two of our cents, will be our money during our



"Here is an arcade."

stay. We stop at a bank to exchange our greenbacks for such gold, silver, and copper, and then go on with our walk.

We have many purchases to make, but hardly know just where to go. The signs are different from ours. Here, for instance, is one "Fellmonger." That is a fur store, as we see from the skins

of foxes, bears, kangaroos, antelopes, duck moles, and other animals in the windows. Hardware merchants are known as ironmongers, and those who sell cloth are drapers. If we should ask for a dry goods store, the people would think we meant a saloon, for "dry goods" is the term sometimes here used for liquors, and they might direct us to a public house, as saloons are called in Australia. Druggists are called chemists and drug stores chemist shops. Lumber dealers are timber merchants, and the lumberman is a timber getter.

In Australia candies are almost always called sweets and sometimes "lollies," a contraction of "lollypops,"

an English word meaning taffy. We see the word "Lollies" over some candy stores; and at the theaters, shows, and football games boys go about with baskets of candy, crying out, "Lollies, ladies! Lollies, gents! Don't you want a box of fine fresh lollies?"

Suppose we stop a moment and look at the people. They have faces like ours, and we may well call them our brothers, for they came from England, which most of us consider our mother country. The Australians, however, are taller than either the Americans or the English. See that man passing by. He is more than six feet in height, and the woman with him is almost as tall. These people grow so thin that, in fun, they are sometimes called **corn-stalks** because they are so tall.

The people are well dressed. Even the men who are mending that sidewalk wear good clothing. They look more like American workmen than like the poorer working people of Europe. Australia is a new country and, as there is much to do, wages are high. The people make money and spend it quite freely. We can see this by the costly goods in the store windows. Everything one can think of is displayed here, no matter in what part of the world it is made. The Australian will pay for the best, and so all countries send their goods here for sale.

We get some idea of the enormous commerce by the shipping in the harbor, and learn more of it as we see the long lines of teams hauling freight through the streets. Vast quantities of goods are always coming in and going out.

Here we are at the Post and Telegraph Office. You can see the red-coated postmen starting out on their routes.

There are red-coated men taking the bags of mail from red wagons which have just come from our steamer, and other red wagons dash past us on their way to the trains.

The Post Office has many branches. We can see the signs over the doors. There is a postal savings bank, and next door are telegraph and telephone departments. All such things are under the government, the Australians believing that they should be managed at the lowest possible cost for the people. The government controls the railroads, and also owns the street cars in many of the cities, and gives quite a long ride for two cents.

That great building up the street is the town hall, where the mayor and other city officials have their offices. It also contains an audience room for public amusements, where every week one can attend a concert free of charge. The city keeps an organist to play for the people, and it owns one of the largest organs of the world. The organ has nine thousand pipes, some as high as a three-story house and some as short as a pin and almost as small. In other cities we shall find similar halls, Melbourne having one with an organ that cost thirty-five thousand dollars.

There goes a party of boys in uniforms with flat bats in their hands. One is throwing up a ball and catching it as he runs. That is one of the cricket clubs of Sydney, and its members are on their way to play a match with the crack team of Melbourne. Let us follow and have a look at the game. We find thousands of people at the playground. There are other clubs playing in different parts of the field, and as we go from one to another we hear nothing but talk about sports.

The Australians are a sporting people, and almost every



"That great building is the town hall."

man, woman, and child gives a part of each week to play. Sydney has several thousand acres of parks devoted to public amusements, and in Melbourne alone there are one hundred parks and a dozen grounds especially for football and cricket. Cricket is the favorite game here. It holds about the same place that baseball does with us.

Coming back to the city, we visit the Domain, a park of about one hundred acres right in the heart of Sydney, facing the harbor. It is the most popular of all pleasure grounds here, being especially full upon Sundays, when any one who wishes can speak upon any subject if he can get the people to listen. There are no signs warning us to keep off the grass, and we roll over and over on the sod, rejoicing that our travels south of the Equator have turned winter to summer, and that all is so fresh and green when the snow covers the earth at our home.

3. SHEEP AND WOOL IN AUSTRALIA

THE annual sheep show is going on in Sydney. The city is full of squatters, as sheep farmers are called, and we can see sheep from all parts of the continent and from Tasmania and New Zealand as well. Sheep so thrive in this latitude that Australasia, made up of Australia and its neighboring islands, is one of the best sheep-rearing places upon earth. The two great sheep-rearing centers of the world are situated at about the same distance south of the Equator. Look on your map and you will see where they are. On one side of the globe is Australasia and on the other Argentina in South America. Argentina has a climate much like that of Australia, and it vies with it in fine sheep and wool.

Sheep farming is carried on in almost every settled part of the continent. Some of the stations, as such farms are called, are so large that it would take us several days to ride around one on horseback, and a single field often contains eight hundred acres, or more than five ordinary American farms.

One hundred sheep is quite a large flock in parts of our country. In New South Wales there are several men who each own one hundred thousand sheep, and one who has more than one million, or enough, supposing each sheep to weigh one hundred pounds, to give a slice of mutton to every man, woman, and child in our country and leave plenty over for a stew for our whole nation next day.

Australasia has had more than one hundred million sheep,

so many that if they could be driven four abreast along the Equator, they would form a woollen belt about the waist of old Mother Earth; or, if shorn, would furnish sufficient wool to make a suit of clothes for every one of her American children, with many fragments for patches.



"A woollen belt about the waist of old Mother Earth."

This great industry has grown up since the continent was discovered. There were no sheep here when Captain Cook landed, but shortly after settlements were established, some Spanish merinos were brought in. They did well and formed the start for the immense flocks of to-day.

Suppose we take the cars for the Agricultural Grounds where the sheep show is held. We hear the bleating and baaing before we reach there, and we follow the sound.

We come at last to a great building whose floor is divided up into pens so built along aisles that we can



Part of a flock of twenty thousand sheep.

easily go to any part of it. There are seven hundred sheep in the building, and each has its own pen well bedded with straw. Some of the animals have blue or red ribbons about their necks. They are the ones that have taken the prizes.

What fine sheep they are! I venture to say you never saw so much wool on animals before. Take this prize ram! Don't be afraid he will butt you! He is a gentle-

man of distinguished ancestry, noted for his fine breeding, and has been so kindly handled that he is perfectly safe. Were it not for his horns, his nose, and his feet, we might think him merely a bundle of wool. His fleece lies upon him in rolls and folds, the skin apparently wrinkling to make it hold more. It is so long and thick on his head that we see only the tips of his ears; his eyes are far back of those holes in the wool. The fleece hangs down from the under parts of the body, covering the legs clear to the hoofs. We poke our fingers into the wool. We can not reach the skin without pressing the knuckles far in. How greasy it feels! It is dirty and gray outside, but when we pull it apart it is the color of cream. This sheep has more than forty pounds of wool on him, and his owner would not sell him for three thousand dollars.

The common sheep of Australia, however, have only a very few pounds of wool, often not more than five or six. They can be bought for about the same prices that such sheep bring in our country. We can easily see what a difference it makes if each sheep yields much wool or little. Take, for instance, that squatter over there who has fifty thousand sheep. If each of his flock can be made to yield one pound more at a shearing, he will have fifty thousand pounds more wool to sell every year; so you see how important it is to have good sheep, and why the people pay so much for them.

¶ Leaving the sheep show, we visit one of the warehouses of Sydney, where the wool is brought in from the country to be shipped off to Europe. It is on the edge of the harbor and of easy access to the ships. We go from floor to floor of the vast building, making our way in and out

through the wool, which is stored here by the thousands of bales. Each bale is about as high as our heads. It is wrapped in yellow bagging and weighs about three hundred and ninety pounds.

Some of the bales have been opened, and the white wool seems to be pouring out upon the floor. Each bale is



In a wool warehouse.

marked with the name of the station from which it comes. In some places men are tearing the bales apart and sorting the wool, and in others buyers are examining the piles in order to make bids upon them. Each buyer takes up the wool in his hands and pulls it apart. We do likewise and then throw the stuff back on the pile. How dirty it is! Our hands shine as though coated with vaseline, and our cuffs are soiled with the grease. The sheep are

not always washed before shearing, but the wool is frequently scoured before shipping.

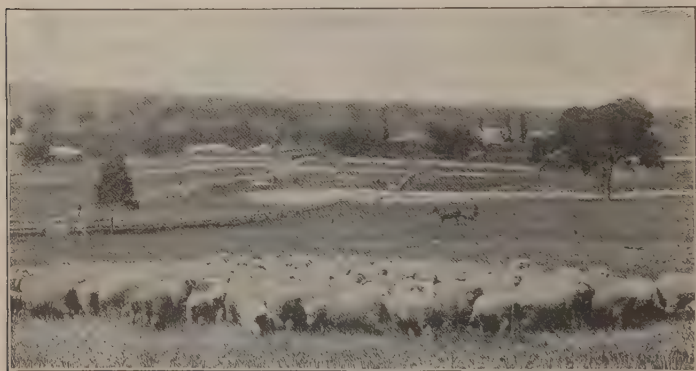
We ask one of the buyers, a man dressed in overalls and a long linen coat buttoned tight up the front, what the wool brings. He replies that the price varies according to the grade, quality, and state of the market. He shows us that it makes a difference also from what part of the sheep the wool comes, some bales being composed only of the shearings of the legs and tails, while others come from the sides and under parts of the body. Fine wool brings twice as much as coarse wool, and it takes an expert to know just what is best.

After the wool is sold, it is exported to Europe in steamships and sailing vessels. The sailing vessels go around the Cape of Good Hope, while the steamers usually pass through the Suez Canal. The shortest distance from Australia to the European markets is about eleven thousand miles, and the freight rate for carrying wool there is sometimes as low as one fourth of a cent per pound. It takes less than four pounds of wool to make a suit of clothes for a man, so that for one cent the ships carry enough wool for a suit from Australia to London. This is one of the wonders of commerce.

Let us go out in the country for a look at the sheep in the fields. One of the principal squatters has asked us to visit his station, and we gladly accept the invitation. We leave in the evening and ride all night on the cars. When we awake we are passing through great pasture fields, some containing large droves of cattle and others thousands of sheep. Now and then we go by fields of wheat, rye, barley, or oats, or through forests of eucalyptus and other

Australian trees; but nearly everywhere there are sheep, sheep, sheep! We see single flocks which contain as many as two thousand animals, and at one place ride several miles by a drove of sheep on its way from one station to another.

There are but few farm buildings, and no great barns such as we have in our north central states. The weather



Scene on a station.

is so mild that the grass is good all the year round and the sheep need no other food. They require no shelter, living out in the fields from one year's end to the other. The houses we see are chiefly one-story structures, painted yellow and roofed with galvanized iron. Some of them have iron chimneys, and nearly all have iron tanks on their porches to catch the rain water as it comes from the roofs. Australia is a dry country, and in many places every drop of water that can be so caught is saved.

At last we reach the end of our railroad journey, where we find riding horses which take us across the country to our squatter friend's home. It is a big building with many

smaller ones about it. Some of them are offices, stores, blacksmith and carpenter shops, and the others are the homes of the men.

It takes a large number of employees to run such a station, and the home settlement is almost a village. The house of the squatter is a one-story building, roofed with iron, with many rooms opening out upon porches, with a large parlor and all the surroundings and furniture of a comfortable home. There is a cricket ground at one side of it and grounds for croquet and golf.

There are also great stables with horses for pleasure and work. The station is miles in extent, and almost every man on it has a horse. The sheep are kept in fenced fields and hence do not need shepherds, as our great flocks on the Rocky Mountain plateaus do; but it is necessary to have boundary riders, men who go about the fields every few days to see that the fences are up and that the sheep are all right and that they have plenty of water.

We spend some time at the station, going about with the squatter and the men, learning much about sheep and wool raising. We see them shear sheep at a neighboring farm forty miles off. A large gang of men does the work, cutting off the wool so fast that one man shears one hundred or more sheep in a day. The men are paid about five cents for each sheep, and their earnings depend on the number they shear.

When the sheep come into the hands of the shearers they look fat and gray, but when shorn they seem to have shrunk and their coats are snow-white.

At another place we see men shearing sheep by ma-

chinery worked by steam or electricity. The cutting is done by little knives moving back and forth like the knives of a mowing machine. The knives are in a frame which is pressed against the wool, cutting it more easily and smoothly than by hand. The power is communicated by a tube like that which the dentist uses for drilling out teeth.



Shearing sheep by machinery.

While the shearing is going on, men take the wool and sort it. They pack it in bales and load it on wagons, which are hauled by long teams of horses or oxen to the cars. In Western and South Australia camels are often used to carry the wool, two bales of wool forming a load for one camel.

We are delighted with our life at the station. We thought it would be tame so far off in the country, but



A load of wool.

with riding and driving and games, every moment is filled. The squatter's boys think nothing of going off ten miles to play cricket, and his girls often ride twice as far to a party or to spend the night with a neighbor. They have their teachers at home, and their life seems very easy. We must remember, however, that this is one of the richest of the sheep farmers and that his lands are among the best in Australia. The smaller farmers often have as hard times as our small farmers at home. All suffer when the weather is dry, some parts of the continent being subject to frequent droughts, during which the sheep die by thousands for lack of water and food. The droughts clear the land of everything green. The pastures become as bare as a road, and the sheep stagger about, nosing in the dust for the seeds of grasses and trees.

Their owners often have to sit and watch them die, knowing they can get nothing to feed them. The poor squatters sometimes go crazy because the rain fails to come.

In some districts the evils of the droughts are avoided by artesian wells which are being made by the government in many parts of the continent, where, although the surface of the land is almost a desert, vast reservoirs of water are found far below. Some wells are several thousand feet deep, a single one often flowing a million and some more than a million gallons of water a day. The water is often hot when it comes forth, but it soon cools. It is a little salty, but the sheep drink it and thrive on it.

Another great enemy of the sheep is the rabbit, which is found in vast numbers in many parts of Australia. These little animals eat the grass required for the sheep. Men are kept to do nothing else but hunt and trap rabbits, a single man sometimes killing four hundred in a day. Many sheep farms have fences of wire netting about them to keep out these pests, and some of the states have built hundreds of miles of rabbit-proof fences along their borders.



4. SOUTH AUSTRALIA AND THE GREAT CENTRAL DESERT—ADELAIDE

WE have returned to Sydney and are now on our way to Adelaide, the capital of South Australia. The trip is a long one, but we have sleeping cars and can spend day and night comfortably in the train. The weather is warm, and the dust makes us thirsty. We ask for a

drink, and are told to go to the water bag on the platform of the rear car. Some of the Australian cars carry no ice, but instead have canvas bags about two feet square filled with water, so hung on the platform outside that the wind strikes their wet surface, keeping them cool. There is a spigot at the bottom of each bag to which a tin cup is fastened. Such water bags are often used in Australia, forming the cooler of many a home. When a man takes a long trip over the desert, he ties a water bag under his wagon or carriage, and if the wind is blowing, no matter how warm the weather, he is sure of a cool drink on the way. The canvas is so closely woven that the water does not run through.

We start from Sydney at night, and in the morning cross the Murray River, which forms the boundary between New South Wales and Victoria. The Murray is seventeen hundred miles long. It is the largest river of Australia, and with its tributaries drains the western sides of the mountains along the east coast. It is a sluggish stream, navigable for small steamers as far northeast as Albury, the place where we cross. The waters are dark, but they are fringed with trees; and as the river winds about in its course, the Australians think it quite picturesque.

After leaving the border town of Albury on the Murray, we do not see that river again until we have crossed the whole of Victoria and traveled about a hundred miles through South Australia. The trip is delightful. The country is hilly, but there are fine farms on which are great herds of cattle and thousands of sheep.

Victoria is the smallest of all the Australian states. It is only a little larger than Kansas, but in proportion to its

size it is far richer than any other state of the commonwealth. Nearly all of it can be used for farming or grazing, and about one half of it has gold, silver, or other minerals. It is better settled than other parts of Australia, and we pass through many fine towns on our way to Adelaide.

Adelaide is the capital of South Australia. By this you must not think that it is the capital of all southern Australia, for Victoria, New South Wales, and the lower part of Western Australia are as much a part of southern Australia as this province. South Australia includes the whole central portion of the continent, a great slice of land running north and south from one end of it to the other, comprising almost one third of Australia. It is one fourth as large as the whole United States, including Alaska.

A great part of this vast territory is desert. It contains the great central basin in which there is no water except in the salt marshes, blind creeks, and rock holes occasionally met with. In this region Australian explorers encountered great hardships in their attempts to cross the continent.

Our Great Lake Region is one of rich farms, fine forests, and valuable mines. It is surrounded by cities and villages, and peopled by millions of happy men, women, and children. The great lake region of Australia is far different. It has no inhabitants and no vegetation of value. It belongs to the Australian Desert, one of the bleakest, dreariest, and most horrible parts of the globe. The great lakes here, such as Lake Torrens, Lake Gairdner, and Lake Eyre, are all salt. They are surrounded by flats of treacherous mud which have a salt crust over

them so that they make your eyes sore to look at them. Lake Eyre is so dreary that it has been called the "Dead Sea of Australia."

The country about the lakes and on and on everywhere to the north and west of them is as thirsty as the Sahara. The greater part of the soil is composed of gray sand upon which the sun beats almost straight down for hours



A squatter's home near Adelaide.

every day during the hot parts of the year. Much of the sand is dotted with bunches of spinifex grass, which would tear our clothes if we tried to make our way through them, but would not shield us from the burning sun. In places the sand has drifted into hills and ridges, in which our feet and those of our horses or camels would sink as we crossed them. In other regions we should run into porcupine grass, each bunch of which is like a huge pin-

cushion with sharp knitting needles sticking out on all sides. There are vast tracts covered with low trees, and also bleak and bare mountains and sandy plains filled with pink, gray, and purple boulders which seem red hot under the sun.

This desert is perhaps the driest region on the face of the globe, and explorers who have made their way through it have brought back strange stories of its terrible heat. Captain Sturt, who visited it some years ago, says that the mercury rose in his thermometer until it broke the tube, and that for three months it was more than one hundred degrees in the shade. It was so hot that his hair stopped growing, the ink dried on his pen when he tried to write, his comb split up into hairs, his finger nails became as brittle as glass, and the wood shrank so from the heat that the screws dropped out of his boxes and the lead became loose in his pencils.

This region is so vast that we can not describe it in detail. We could go northward or westward for months if we had any means of sustaining life, but day after day we should find only this same hot, thirsty land which is one of the driest regions on earth. But at times, except in the incurable desert region, good rains fall and vegetation is luxuriant. Pastoral settlement is gradually pushing out into the area of scanty rainfall.

The region near the Murray River where we are now is as beautiful as any we have seen in Australia, and the land is exceedingly rich. Adelaide is surrounded by good farms, gardens, and vineyards. It is a thriving city, and its people say that it is the most beautiful of all the towns south of the Equator or, as they say, "south of the Line." It is

sometimes called the "White City" from the white stone which is used for its buildings.

Adelaide lies on the river Torrens about six miles by rail from the Gulf of St. Vincent, an excellent harbor. We stroll along King William Street, passing the magnificent public buildings of the city and state, walk through Rundle and Hindley streets, the chief business thoroughfares, and later on take a drive to the top of Mount Lofty for a view of the city and country about. On every side of us there are fine farms, gardens, orchards, and vineyards. There are rich pastures with cattle and sheep feeding upon them, and in the center the white city of Adelaide with the Torrens running on by it until it is lost in the sea in the distance. It is a beautiful view, and we do not wonder that the Australians are proud of this part of their territory.

We drive through farms on our way back to the city, and at the public departments learn that South Australia has some other rich lands in the far north. Just now we wish to see more of Victoria, and we take the cars through that state to the town of Ballarat in the gold-mining regions.



5. GOLD MINING IN AUSTRALIA — BALLARAT — MELBOURNE

HOW would you like to find a gold nugget as big as a football and weighing as much as yourself? Several such lumps have been found near Ballarat where we now are, and who can tell what we may see if we wander about through the hills?

The earth of about one half of Victoria contains more or less gold, and from this mining region alone has come gold to the amount of three hundred million dollars.

Ballarat was the birthplace of the mining industry of Australia. Gold in paying quantities was first found in New South Wales shortly after its discovery in California, but the product was small, and it was not until some of these big lumps were unearthed near Ballarat that people from all parts of the world flocked here to dig. They came by sea to Melbourne and thence inland to Ballarat. There were so many that Melbourne soon grew to be a rich city, its wealth of to-day starting from the discovery of gold.

The first gold found was in loose veins and dust in the bottom of the streams and along their banks. Then a nugget was unearthed that weighed ninety-eight pounds, and then another still larger. Later on came the famous Welcome nugget, which weighed over one hundred and eighty-four pounds and which sold in Melbourne for fifty thousand dollars; and later still the Welcome Stranger, the biggest of all.

Do you wonder that the miners became almost crazy over these discoveries? They dug up the earth and washed it again and again to get out the gold, so that every bit of dirt over which we are walking this morning has been handled over and over. As the loose gold gave out, the miners dug deeper and deeper. They found veins of the precious metal away down under the earth, and great works were put up to hoist the gold-bearing rock to the surface and crush it. Some of the mines are now almost half a mile deep and are still yielding gold.

Soon after the big nuggets were found, rich mining camps sprang up not only in Victoria but in New South Wales. Then gold was discovered in Queensland and later in Western Australia, South Australia, Tasmania, and New Zealand, until to-day there is not a state of Australasia which does not produce some gold.

Mount Morgan, a mountain of iron mixed with gold, near the coast of Queensland, is said to be the richest gold mine of the world, and about the town of Gympie, some distance off, there is so much gold in the earth that the boys sometimes find the yellow grains in the gutters after a rain. There are more than two thousand gold mines in Queensland alone, and also rich deposits of tin, iron, copper, and lead. The tin is found mixed with the sand of the streams, the grains looking very like the iron filings of a machine shop or smithy.

In Western Australia the best gold fields are in the desert. Camels are used by the prospectors, and supplies of food and water are carried from one place to another by caravans. There are parts of Western Australia where we might travel for hundreds of miles over nothing but rock and sand, but the rock and sand would be more or less mixed with gold.

Australia is a wonderful continent. It is rich in minerals and other resources, but parts of it are so little known that we can not tell just how rich it is. It already vies with North America and Africa as the greatest of the world's gold producers, and it has vast beds of coal north, south, and west of Sydney which supply most of the ships of the southern Pacific Ocean.

Let us go on with our trip about Ballarat. We enter

mine after mine, now descending the shafts and climbing through tunnels over rocks away down underground, now watching the heavy stamps crush the ore to a powder to get the gold out, and then visiting the furnaces from which flow the rich yellow streams into the molds, forming the gold bricks of commerce.



Placer mining near Ballarat.

How would you like to attend school in a mine? This is what is done in the mining college at Ballarat. The college has a mine beneath it, worked by the pupils under the eyes of their teachers. The boys themselves blast down the rock. They manage the machinery which hoists it to the surface. They crush it and gather the gold and smelt it into bricks.

There is gold on the train which takes us to Melbourne. It is on its way to the mint, where it will be coined into

money and flow through the streams of commerce all over the world. The men in charge of it take us with them, and the mint officials show us all the processes of melting and coining, after which we go to the hotel. We have seen so much gold that it dances before our eyes in our sleep, and we dream of yellow nuggets as big as our heads, which we make into beautiful coins to give us all we want for the rest of our lives.



Stamping gold coins.

The next day is spent in driving about Melbourne. It is a fine city almost as big as Boston, with magnificent buildings of gray stone, wide streets paved with wood blocks, and so many parks and gardens that it seems more than half pleasure grounds. We drive out to the Flemington Race Course and take a spin around the track, which the Australians think the finest of its kind upon earth.

After that we look at the public library and the art gallery and visit the colleges and schools. Melbourne has excellent schools, and the same is true of every town in Australia. There are fine libraries almost everywhere, and even small towns have schools of arts, where good books are kept for reference.

We spend some time in the zoölogical garden and the botanical garden and take a ride on the river Yarra,

which runs through Melbourne on its way to the sea. Melbourne is very near the mouth of the Yarra, so near that large steamers come to anchor in the city and the biggest of ocean vessels have a safe harbor only a few miles below it. It is therefore a great commercial point, and its people do business with all parts of the world. It vies with Sydney as the greatest city of Australia, the two towns being so jealous of each other that here in Melbourne we have to be careful not to say much in praise of Sydney.



6. A LAND OF STRANGE PLANTS AND ANIMALS

LEAVING Melbourne we travel for days north and south over the country, avoiding the great cities and exploring the wilds. Now we are climbing the beautiful mountains which run along back of the coast, lingering in valleys bedded with ferns of all sizes. There are fern trees so high we can climb them, and, what is worse, nettles much higher. The nettles have light green leaves which sting terribly when we touch them. There are also palm trees and evergreens so matted together that they make us think of a tropical jungle. We can hardly make our way through them.

Other regions are all woodland. There are miles and miles of great trees with no undergrowth and plenty of grass. Most of the forest is of the eucalyptus or gum-tree variety, of which there are more than three hundred kinds in Australia. Some gums, like the mallee, are about

ten feet high with trunks no thicker than a blackboard pointer, and others are among the largest trees known. The gigantic blue gum, for instance, grows three hundred feet tall and six feet in diameter. It is said to reach a greater height than our famous big trees of California.



A grass tree.

It is the eucalyptus that gives to Australia much of its gloomy appearance. Many regions are covered with mallee and mulga scrub, vast areas of dusty brown bushes so matted together that it is almost impossible to make one's way through them. The taller forests are dreary. The leaves of the gums hang down from the branches as though they were weeping, and the bark is half off. On some trees the leaves never fall, and remain green all the year round. The trees shed their bark instead of their leaves, the old bark hanging from the trunk

like disheveled hair, while the new bark is white or silver-gray.

In some places we pass through groves of dead trees which have been ringed with an ax to kill them for clearing. Such trees have lost their leaves, their bark has dropped to the ground, and their white trunks and branches look like polished bones or skeleton trees. The logs on the ground are white, the stumps are white, and all the surroundings like those of a graveyard. We feel very depressed during parts of our journey, and do not wonder that part of the interior has been called the "Never, Never Country."

Still, nature is so strange that we are interested every



A bottle tree.

moment. We are always finding new plants and flowers. In northern Australia there are bamboos, palm trees, and tropical jungles. We find beautiful orchids of odd shapes with singular flowers, and a lily known as the "Gigantic," which grows to a height of ten feet and bears an immense dark red blossom. The grass tree is like a tall stump

which has sprouted out grass on the sides and top, and the bottle tree has a trunk the shape of a great bottle, with branches and leaves growing out of the cork.

The Australian animals are even more interesting than the plants. This is the land of the marsupial or pouch bearer. There are more than one hundred different kinds of animals which have pouches on their bodies, in which they carry their young. Some of these animals are taller than a man, and some no bigger than your thumb. Some climb trees, some gallop over the plains, and some spend more than half their time in the water.

The largest of the marsupials are the kangaroos, ranging in size from great gray fellows measuring more than



Kangaroos.

seven feet from nose to tail, down to the family dwarf, the kangaroo rat. We see specimens of every kind in the zoölogical gardens of Sydney and Melbourne, and we meet some during our tour through the country, now and then having a kangaroo hunt with the squatters.

The red and gray kangaroos are hunted in most parts of Australia and killed by the thousands. Horses and dogs are bred for the sport. The dogs are a sort of hound, very fierce and fleet of foot. The big kangaroo has enormous hind legs which send it flying along as though moved by steel springs. It can leap twenty or thirty feet at a jump, and it fairly gallops over the country.

When brought to bay, it is dangerous and will then attack a dog or a man. It usually backs itself up against a tree, and as the dog comes up it seizes him with its fore paws and hugs him tightly to its breast, while it tears him to pieces with the single claw which it has on each hind foot. This claw is as hard as ivory; it is three or four inches long and it cuts like a knife. Kangaroos can swim as well as run, and they take to the water when they can. If a dog follows them, they will seize him, pull his head under, and hold him there until he is drowned.

These animals usually go about in herds. We often see a male and female together, and sometimes spy the head of a baby kangaroo sticking out of its mother's pouch. The kangaroos are very small when born, some kinds being not more than an inch long at that time. The mother puts her babies into her pouch, and there they live upon their mother's milk for eight or nine months, coming out now and then to eat grass and crawling back when they are tired or at the least sign of danger. They leave the pouch when they become too heavy for the mother to carry.

Among the most common of the small kangaroos are the wallabies, which are killed for their skins. There is a great demand for kangaroo leather for bags, shoes, and other such things, and much of it is yearly exported to the United States.

Australia has a marsupial bear, and in northern Queensland there are kangaroos which live in the trees like monkeys. They climb about and spend most of their time feeding upon the leaves, seldom coming down except for water.

Among other curious animals of the continent are two

little beasts which lay eggs. One of these is the duck-billed platypus and the other the echidna or spiny ant-eater. The platypus is a sort of water mole, with fur as soft and thick as that of a beaver. It is about twenty inches long and it has a flat head, which ends in two jaws almost exactly like a duck's bill. It has web feet, so that it can swim through the water. It is usually found along the streams of southeastern Australia and Tasmania, living in little tunnels which it bores out from the land down into the stream. In the middle of such a tunnel the platypus makes its house, having one door to the water and another to the land. It builds its nest halfway down and there lays its eggs and hatches them, sitting, it is said, upon the eggs as the birds do. The platypus feeds upon water insects, shellfish, beetles, and roots. Its fur makes beautiful cloaks.



Duck-billed platypus.

The other egg-laying animal is the spiny ant-eater, somewhat like a hedgehog in size and appearance. This animal has a long snout, and a round, flexible tongue, covered with a sticky secretion, with which it can lick up the ants upon which it feeds. It has a pouch in which it places its eggs, carrying them about until they are hatched.

We see bats now and then, some so big they are known as flying foxes, and others so small they are called flying

mice. We pass dingos during our horseback rides through the woods, and the squatters tell us to shoot them at sight, as they worry the sheep and sometimes kill them by hundreds. The dingo is the wild dog of Australia. It does not bark or growl like a good, honest dog. It simply howls. It is a sneaking animal and as cunning as a fox. It is so dreaded by the shepherds that bounties are given for dingo scalps, and the wild dogs are hunted just as are foxes in England.

The birds of Australia are as strange as the animals. Naturalists tell us that the continent has more than seven hundred varieties of birds which are found nowhere else. There are vast numbers of parrots in the woods of the north, some as white as snow, others of a delicate pink, and others as red as fresh blood. There are yellow parrots, green parrots, and parrots of every shade and tint you could imagine.

One of the most curious birds is the lyre bird, which has a tail shaped like a lyre, and another is the satin bower bird, which builds up a sort of playground near the tree where its nest is. Its playground is sometimes three feet in diameter, consisting of a floor made of woven sticks raised up from the ground. Upon this floor the birds build a little bower of woven twigs. They weave the gay feathers of parrots and other birds in and out of the sticks, put bones and shells here and there about the bower, and collect everything they can to beautify it. These birds when young are bright green, but when full grown, the females are green and brown and the males have feathers like shining black satin. They are found along the east coast of Australia.

Australia has eagles, owls, humming birds, pigeons, quails, pheasants, and brush turkeys. Along the coast are ibises as tall as we are, with pink legs like pipe stems, and with long, pink necks, and bodies covered with feathers as white as snow except under the wings, where they are black. There are black swans, pelicans, and wild ducks. There are divers and gulls, as well as swallows, wrens, crows, and robins.

Australia has also some immense birds which resemble the ostrich, although they are not quite so large. The cas-

sowary is to be found in Queensland, and the emu is common there and in other parts of Australia. The emu is not so tall as the ostrich. Its legs are shorter and its body thicker and clumsier. Its feathers are much like coarse hair. Its color is dark



Emu and chicks.

brown, spotted with gray, and its wings are so short that they are almost invisible when held close to the body.

Emus are quite dangerous. They have strong bills, and they bite. They kick somewhat like a cow and hit so hard that one blow of the foot is enough to kill a dog or man. The best time for hunting the emu is in the morning when the bird comes out to feed on the grass. It is chased on horseback with dogs which are trained to catch it by the neck in such a way that they can not be easily kicked. The squatters are anxious to destroy the

emus to save the grass for the sheep, and for this reason they not only shoot them but also hunt their nests and break the eggs. In one county of New South Wales ten thousand emus were once killed in nine months, and at one sheep station fifteen hundred eggs were found and destroyed.

Emu eggs are enormous in comparison with hens' eggs, but are much smaller than the eggs of an ostrich. The shells are sometimes mounted in silver and used as milk jugs or sugar bowls.

We can not possibly mention all of the seven hundred kinds of birds found in Australia. There is one bird,



Laughing jackass.

however, that speaks for himself. This is the laughing jackass, as the people call him. He is a kingfisher, with a head as big as his body but a voice that is many times bigger than both body and head. When he begins to sing, he cooes like a dove and then bursts out into a

ha! ha! ha! hoo! hoo! hoo! — a most contemptuous and tantalizing laugh which he keeps up until at last we laugh in reply. This bird eats snakes, lizards, and other such things, and for this reason it is protected by law.

Australia has many mosquitoes, ants, and other insects; it has venomous snakes, crocodiles, and 240 kinds of lizards, including the goana, some of which are seven feet long.

7. QUEENSLAND—THE PEARL FISHERIES —THE GREAT BARRIER REEF

WE have come north to Brisbane, the capital of Queensland, and are about to start on a long sea journey around the Australian continent. Brisbane is a fine city on the Brisbane River, eighteen miles from its mouth, but the stream is deep and there are ocean steamers at anchor right in the city. It is warm, and we are glad to keep under the awnings as we make our way from store to store laying in our supplies. We visit the public buildings and the mining museum, learning much of the resources of this part of the continent. Queensland is larger by half than all our Atlantic states, and although parts of it are desert, it has rich farms and pasture fields not far from the coast, and rich deposits of minerals, including gold and opals in the mountainous sections.

Taking ship, we steam down the river through Moreton Bay out into the Pacific Ocean, and then start northward through one of the most remarkable waterways of the world. This is the channel which lies between the coast and the Great Barrier Reef, a rocky wall which has been built up by the little coral animals for more than twelve hundred miles along the northeastern coast of Australia.

How smooth the water is! We can not realize that we are on the ocean; we seem to be in a mighty canal one side of which is the rocky continent of Australia and the other this vast wall built up from the bottom of the sea by countless millions of coral polyps.

The wall is from ten to seventy miles wide. In some

places it just reaches the surface and can not be seen except at low tide; at others it rises above the water in ridges and ragged rocks, sometimes forming gardens of pink, red, and white flowers, all of coral. Here real plants and trees have sprouted out of these stony gardens, and there the coral has been built up in great horseshoe rings with water inside them. Such rings are called



Coral garden, Great Barrier Reef.

atolls. Coconut trees, green grass, and beautiful flowers grow upon them, forming emerald rings surrounded by and inclosing the sapphire sea.

The Great Barrier Reef runs through the Pacific Ocean at a distance of from five to fifteen and more miles from the coast. At Rockhampton where we enter the channel it is about one hundred miles wide, but a little farther north it narrows, giving us quiet waters through which our steamer is plowing its way.

How delightful the journey is after our thirsty travels

on land. The sun is hot, but the soft, cooling breezes of the Pacific come to us over the atolls. The air is as clear as on our Rocky Mountain Plateau. The sky is a light blue with a few clouds which make patches of velvet of a deeper blue, where their shadows fall upon the dreary gray mountains of the mainland. It reminds us of the Rockies, for nature here is much the same as in Arizona and Nevada.

Our first stop is at Townsville, a little city at the foot of bleak and bare hills. It is not unlike one of our western mining towns, save that it has more schools and more pleasure grounds. It is the chief port for the Charters Towers and other gold regions and for the rich pasture lands behind it. How hot it is! The people are dressed in light clothing. The children wear straw hats as big as parasols and go barefooted. We are now on the edge of tropical Australia, and it will grow hotter and hotter as we go farther north. On our continent the north lands are cold and the south lands hot. Why is it not so in Australia? Look at your map! Australia is south of the Equator, and its northern parts get the more direct rays of the sun.

At Cairns, still farther on, we visit sugar and tobacco plantations, and enjoy the bananas and pineapples which are raised there for export to Sydney, Melbourne, Adelaide, and other towns of the south.

Calling at Cooktown, a pretty place at the foot of Grassy Hill which rises more than five hundred feet above it, we walk up Charlotte Street to visit the monument on the spot where Captain Cook beached his vessel. We then steam in and out among coral islands along Cape York



" At Cairns we visit sugar plantations."

Peninsula, a vast barren tract five hundred miles long. On much of the coast there is nothing in sight but sand, rocks, and reddish brown cones, each of which is the home of thousands of ants. These little ant castles cover the land in some places. Each cone is composed of many cells or rooms rising floor above floor like the flats of a great apartment house; some of the cones are twenty feet high. Australia has many kinds of ants, some red, some black, and some white. The white ants are wood eaters and they usually work away in the dark, eating the wood of a tree, post, or piece of furniture until only a shell is left.

More interesting to us just now are the little animals or polyps which have built up this great reef, and the coral islands which dot the Pacific Ocean both north and

south of the Equator, and especially in the South Seas not far from where we are now. The coral polyp extracts lime from the salt water, and from this lime its minute coral skeleton is formed. The skeleton remains after the polyp is dead, other skeletons being added, either by its children or by other polyps; and in time, by the work of millions of such little beings, these islands, reefs, gardens, and flowers of coral are built up out of the water. It is from lime that all sorts of shells are formed, including those of the pearl oyster and even the pearls themselves.



Shells of the pearl oyster.

The coral islands and reefs are the favorite living places of this oyster. It will not thrive in the dirt, nor in any place where the tide moves the sand about. The pearl oyster fastens itself by a muscle, extending out near the hinge of the shell to the coral formations, often picking out caverns in the reef and caves under the water. If undisturbed it grows to an enormous size, the shells often being as large as the largest dinner plate and sometimes eighteen inches from one side to the other.

Pearls are found inside the shells and often in the flesh of the oysters. It is supposed that each is formed by a

grain of sand or some other foreign substance getting inside the shell. This scratches the oyster, which at once begins to make a covering over it. The oyster exudes more and more carbonate of lime, painting the substance again and again until it becomes a smooth ball.

A pearl cut in two and put under the microscope shows concentric layers like an onion, and often a little hole in the center where the offending grain of sand or other substance was.

Pearls are not always round. They are often pear shaped and sometimes of other forms. Round ones are the most valuable, the largest and brightest often selling for many thousands of dollars. The commoner kinds bring much less.

The shells of these oysters yield more money than the pearls themselves. Many oysters have no pearls, and in some the pearls are so small that they are comparatively worthless. But all oysters have shells, and the shells are of value in commerce. They are used for making buttons, knife handles, and other beautiful things. They are in such demand that men go out in boats to the coral reefs and islands about Australia and in the South Seas and dive down for them. They gather thousands of tons of them every year for export to Europe. Traders go from island to island buying shells of the natives, in exchange for tobacco, calico, and other goods. The shells are sold by weight, the best bringing as much as one thousand dollars per ton, while even the poor ones are worth getting.

Some of the best pearl-oyster grounds about Australia are off the northeastern coast in the very seas where we

now are. We meet fishing boats as we steam northward, and upon rounding Cape York, we land at Thursday Island in Torres Strait, one of the headquarters of the pearl-fishing industry. Several fishing schooners lie at anchor inside the harbor, a steamer bound for Europe is taking on a cargo of shells, and pearl divers by the score are among the crowd of men of all nations which meets us as we step upon the pier.

Thursday Island is at one of the crossroads of the sea. Ships from India, China, and Japan stop here on their way to and from Australia, and we find people of almost every race in this part of the world. There are black men, brown men, and yellow men; some from Malaysia, some from China and Japan, and others from the islands about. There are also whites, for the island belongs to Queensland, and its magistrate is an Australian, as are also the soldiers in the barracks near by.

We take a stroll through the town, visit the warehouses where the shells are stored, and later on go out and watch the pearl fishers as they dive down after shells. The men are first clad in thick flannel, and then in diving suits which will keep out the water. Each suit has a metal head with glass at the front so that the man can see out, and a rubber tube so that fresh air from above can be constantly pumped into the suit. He has boots with heavy soles of copper or lead to enable him to sink, and a canvas bag for shells. Thus dressed he goes down to the bottom of the sea, and moves about where the pearl oysters are. He cuts them off from the rocks and puts them into his bag, being careful to avoid the fierce sharks which sometimes follow the boats, and also the great squid, a marine mon-

ster with long arms, which vomits a black fluid so discolored the water that the man can not see and is liable to fall against the rocks.

When the divers come up, their bags are emptied. The shells are opened with a thin-bladed knife, not unlike a table knife, and the oysters taken out. They are carefully examined to see if they have pearls in them and then thrown away. This work is watched by the owners of the boats, for otherwise it would be easy for a man to steal pearls worth hundreds of dollars.



8. AMONG THE ABORIGINES OR NATIVE AUSTRALIANS

WE have waved good-by to our pearl-diving friends at Thursday Island, and are now sailing westward along northern Australia. The captain has stretched canvas over the deck, for the tropical sun is terribly hot, and the water reflects its rays in a blinding glare. The sea is like glass, and our vessel moves through it without perceptible motion.

It takes us two days to cross the Gulf of Carpentaria, which cuts almost as deep into the land as the Gulf of Mexico. Farther on we pass numerous green islands inhabited by natives and finally come to anchor before Palmerston, the chief city at this end of the continent. Palmerston is the capital of the northern territory. It has but a few hundred people, and among them some Chinese and East Indians, who act chiefly as servants and

laborers. It is situated on a hill sixty feet above the harbor which almost surrounds it, making it cool notwithstanding the tropical sun. The town has many good buildings, including a courthouse, two or three banks, a church or so, some stores, and, what is better than all, a post office where we send letters home.

Strolling through the streets, we meet many of the half-savage natives, and learn that they come from camps not far away. This part of the continent has more aborigines, or native Australians, than any other. Vast tracts are almost uninhabited except by these curious people. They were never many in number, and,



Australian aborigine.

like our Indians, they have become fewer and fewer in those places where the whites have taken up the good lands. They have also decreased elsewhere until now only a few thousand are left. Some are employed upon the sheep farms as hunters, and others have camping grounds here and there in the wilds, but in no other place are there so many as where we are now.

What odd-looking people! They are a race of their own like unto no other on earth. At first sight they make us think of negroes, but they are brown rather than black,

and their hair is not woolly. Their lips are not so thick, and their noses not so flat as those of the African. Many are fine looking, having broad foreheads, bold, piercing eyes, straight forms, and deep chests. Others are ugly, crooked, and scrawny. The older men have thick, black beards covering their faces and long, pitch-black hair on their heads, arms, legs, and chests. All have

strong white teeth, which show when they laugh.

How queerly they dress! It is only in the settlements, in this warm, northern country, that they wear clothes at all, and even here the children are naked. Farther back in the country a string or so about the waist or neck, and perhaps a coat of fish oil or a little paint, is a full suit for a man or woman, although in other



"— we see men who use nose pins."

regions where it is colder they have, in the winter, opossum skins tied to their waist belts and thrown over their shoulders.

Each tribe has its own way of dressing, and especially of fixing the hair. Some natives bind the head about with cloths, some stick feathers into their hair, and tie the knuckle bones of kangaroos and kangaroo teeth to the forelocks so that they hang down over the eyes. About Port Darwin we see men who use nose pins ten inches long. The nose is pierced just under the nostril, and the

pin so thrust through that it stands out on each side for five inches or more. Other natives pierce their ears, using kangaroo bones as plugs.

Notice the scars on the bodies of the men, women, and children. They are made for ornamentation, the flesh being gashed with flint or shells and powdered charcoal dusted into the wounds, so that upon healing ridges as thick as your finger are left. There is a man now with scars on his back, and here comes one who is covered with cuts. A parent who is proud of his boy often cuts pieces out of his skin to make him look fine.

Many of the native women we see have scars made by their husbands, who treat them as though they were slaves. The woman is thought to belong to her husband, and if he clubs her or cuts her with knife or spear, no one objects. The woman



"— the shelter of bark."

is expected to do the work of the family, from building the house to cooking the food and taking care of the children. She carries the furniture to the new camp when the tribe moves, and there puts up the shelter of bark or skin under which all crawl in bad weather. She chops her own fire wood and often gathers the food.

What do these people eat? We are afraid to say for fear our friends will not believe us. They eat anything

they can get from kangaroos or opossums to ants, worms, and snakes. They pick the larvæ of beetles out of rotten trees and cook them in red-hot ashes. They eat lizards of many kinds, especially one which is very large and tastes not unlike spring chicken, and also grasshoppers and locusts which sometimes swarm over parts of Australia. They throw the grasshoppers into the fire to burn off the



Throwing the boomerang.

wings and legs, and then take them out and cook each grasshopper separately. Such food is said to taste like roasted nuts.

There are ants which the natives esteem a great delicacy. They eat also the young leaves of certain trees, grass seeds, roots, and all sorts of wild nuts and fruits, as well as frogs, fish, and eels. Honey is got from wild bees by sticking a little white feather upon the back of a captured bee and following it home. Some natives are cannibals, but there are not many

such, although explorers say they have caught them eating human beings.

Native Australians are excellent hunters and trappers. The men are skilled in throwing spears and clubs, especially the boomerang, a flat club about a yard or more long bent into a sort of bow, which they can hurl through the air in such a way that it strikes the object aimed at and then sails back to their feet. Boomerangs are used more

as playthings and for killing small birds than for fighting or heavy hunting.

The natives spear fish, and they catch emus and kangaroos by driving them into nets concealed in the bushes. They make fire by rubbing two sticks together, but as this is not easy to do in wet weather, they seldom allow their fires to go out.

These aborigines are about as low in civilization as any people on earth. Very few of them learn to read and write. They believe in witches, demons, and ghosts, and think their medicine men can, if they wish, cause one to fall sick or die. They have charms to ward off evil spirits, but they carefully avoid caves and thickets which, as they suppose, are haunted by them. Some tribes believe that the white settlers are natives who have died and come to life again, and that, after death, they themselves will be born again with white bodies.



9. WESTERN AUSTRALIA AND TASMANIA

LEAVING Port Darwin, we sail westward into the Indian Ocean and then southward along the state of Western Australia. We cross valuable pearl-fishing grounds and pass by Kimberley, where there are extensive gold mines and rich pastures. We do not stop, but sail on and on farther south.

The water is smooth, and we now and then see a whale. There are some whales now quietly floating on the sea at our right. They are apparently sleeping. Let us see if we can arouse them by a shot! We pick up our guns

and send a score of bullets at the great monsters. The water splashes up where the balls fall, and at the same time one of the whales raises its head. What a huge thing it is! It is like an island rising out of the water. Now the whales are moving. They roll aside the water like a steamer. Now they have dived, and we see them no more.

As we come closer in shore, huge sharks follow our vessel, and we are careful how we hang over the rail. If we should fall in, they would eat us up in a trice. There are so many about here that one of the harbors has been named Shark Bay.

Fremantle, at the mouth of the Swan River, is our first port of call, where we leave the steamer and go by rail ten miles inland to Perth, the capital of Western Australia. Perth is a thriving city of many red brick buildings with awnings over the streets. It has good stores, churches, and schools. We ride through it on street cars, and at night stroll about under the electric lights. We climb Mount Eliza, the great hill at the west of the town, for a look over the country. The river Swan can be seen flowing above and below it, and off in the distance are the Darling Mountains covered with woods.

There are rich farms and gardens in every direction, and we see that this southwestern corner of Australia compares in fertility with the southeastern part. It has great forests of valuable timber, including the jarrah, sometimes called Australian mahogany, and other trees good for ship building. There are also fine pasture lands, but as we have already learned, much of the state

is a vast desert of sand and rock, some of which contains gold.

On our way back to the city we see a caravan of camels which has found its way into Perth, and wish we could hire them for a trip into the wilds. We know, however, that the journey through the desert would be terribly dreary, not to say dangerous, and decide to go back to the ship.

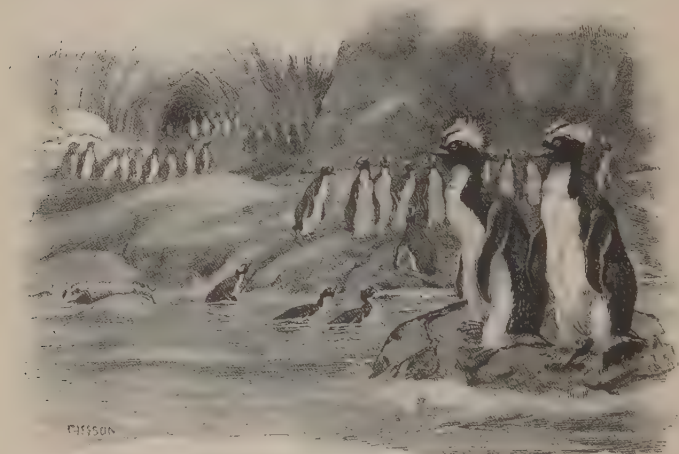
Our stay on shore has been hot, and we are glad to get the sea breeze. We steam south about Cape Leeuwin (lōō'in), the peninsula at the southwestern corner of Australia, to Albany, a fine city on an excellent harbor where ships from Europe stop on their way to Melbourne and Sydney. A day later we are again on board, sailing along the coast of southern Australia, bound for Melbourne, whence we shall go to Tasmania.

We are now in the great southern ocean which extends southward to the Antarctic Circle. It is a mighty belt of water, more than two thousand miles wide, which sweeps around the globe unbroken by any mass of land except the lower end of South America. It is already colder, and we have frequent storms. There is a steady wind from the westward, and the captain orders that the sails be hoisted so that both wind and steam may hurry us onward.

Much of our journey is over the great Australian Bight, which extends for eleven hundred miles along the southern coast. How bleak and dreary it is! The land ends in cliffs several hundred feet high; it is a desert, having no river which empties into the sea for more than six hundred miles. Should the ship be wrecked, we might as

well let ourselves drown, for we should certainly starve or die of thirst if left on this coast. The only vegetation is scrub, thorn bushes, and sharp-pointed grasses which cut like a knife.

There are no signs of life except in the air and on the sea. We see a whale now and then, and nearer the coast a great turtle floating about. Gulls, little and big,



"— we see winged penguins."

follow us, now hovering above the masts, and now darting into the water after something that has dropped overboard. High over us great albatrosses float on their enormous wings, and below them, when quite close to the shore, we see winged penguins swimming about, now and then diving down for their food; they make a hoarse quack, which sounds odd as it comes to us over the water. Farther northward we may see the frigate bird, which compares in size with the albatross and can fly many hours without

resting. There are other strange sights, but the strong winds, the high waves, and the dreary, dreary coast make us tired of the trip, and we are glad when we steam up to Port Philip and come to anchor at a wharf of Melbourne.

Here we stay but a night, and then take the little steamer for Hobart, the capital of Tasmania, the island state of the Australian commonwealth. The water is rough as we pass Flinders Island in crossing Bass Strait. Our boat rolls about terribly; it is raining, and we have to wear our rubbers to keep from falling on the slippery deck. We are a day and two nights on the voyage from Melbourne, and when we awake in the morning, we find ourselves in the mouth of the Derwent River, under the shadow of a great mountain at the wharves of one of the prettiest little cities we have yet seen.

We are in Hobart, on the southern end of Tasmania, in the Switzerland of Australasia. How different it is from most parts of the continent we have just left. Instead of gray sand and rock and dreary bush, we are surrounded by green. There are roses in the gardens, and the woods near by the city are full of beautiful flowers.

Tasmania has vast groves of fern trees; it has forests of the dreary eucalyptus and also the friendly oaks, beeches, and other trees of our country. It is well watered. There are streams everywhere and numerous lakes. It is a land of mountains, valleys, and glens, so beautiful and so healthful that people from all parts of Australasia visit it as Europeans visit the Alps.

There are many tourists in Hobart, and we make up

parties for excursions on the railroad, on foot, and on horseback to the different parts of the island. We climb the mountains and have good luck fishing in the lakes. We have a chance to shoot a tiger wolf and a Tasmanian devil, a sort of ugly bear cat. We spend some time visiting the tin mines for which the country is noted, and go from



"We are in Hobart."

one town to another, being more and more surprised at the good schools, stores, and comfortable homes which these people have here, at the southern end of the earth, on the other side of the globe.

The Tasmanians are the descendants of the English who settled the country. They are very much like our people at home, hospitable and glad to show one about. We visit their sheep ranches and their farms, which are noted for rich crops of wheat, barley, and oats.

Everywhere we go we find orchards of pears, apples, and plums; there are strawberries, cherries, and all sorts of small fruit. We have jam every morning at breakfast, and find ourselves eating apples at all hours of the day. Tasmania produces fruit in vast quantities for export, and her canning factories make jams for all parts of Australasia.

How would our farmers like to market their fruit sixteen thousand miles away? That is what the Tasmanian farmers are doing. They are sending apples to England in steamers especially fitted up with cold storage chambers to keep them from rotting as they go across the Equator.

That farmer in the orchard at the side of the road is picking apples for the children of England. Think what a long journey each apple must take before it gets to its English boy customer. Its first trip will be on a wagon to the railroad station, and thence by car to Hobart. There it will be put in the cold, dark hold of the ship to start with thousands of its brothers and sisters on its long journey by sea. It will go west through the southern ocean for more than one thousand miles before it reaches the southwestern end of Australia, crossing perhaps the track we made when we came about from Perth. It will then go on over the Indian Ocean, and through the Red Sea and Suez Canal into the Mediterranean, and will pass out through the Strait of Gibraltar into the Atlantic, and thence to England. It will be traveling on the sea every day and night for fully a month before it again sees the light of day, and reaches its English boy customer.

And the boy, after all, will pay only three cents for it. This three cents will pay not only the farmer for raising

NEW ZEALAND

SCALE OF MILES
0 50 100 150 200

NORTH ISLAND

North Cape
Hokitika
Vangarei
GREAT BARRIER I.
Hauraki Gulf
Auckland
Eden
Choromandel
Grahamstown
Waikato R.
Havelock
Tauranga
Bay of Plenty
Ngauruwhāia
Hamilton
Rotorua
Mt. Tarawera
North Taranaki Bight
New Plymouth
Mt. Egmont
Mt. Tongariro
Mt. Ruapehu
Hastings
Napier
South Taranaki Bight
Palmerston
Woodville
Masterton
Castle Point
C. Palliser
Wellington
Karamea Bight
Westport
Greymouth
Westland
Hokitika Bight
Mt. Petermann
Mt. Cook
Tasman Glacier
L. Taupo
L. Okataina
Ashburton
Canterbury Bight
Timaru
Waitaki R.
Dunedin
Port Chalmers
Rivercargill
Bluff
Foveaux Str.
Stewart L.
South Cape

SOUTH ISLAND

D'URVILLE I.
Blind B.
Nelsons
Blenheim
Mt. Franklin
Braunton
Kaiapoi
Christchurch
Lyttelton
BANKS PENINSULA
Otago
Dunedin
Port Chalmers
Rivercargill
Bluff
Foveaux Str.
Stewart L.
South Cape

PACIFIC OCEAN

COOK STRAIT

168 Longitude East 172 from Greenwich 176

L. L. POATES, ENGR., N.

the apple, but the railroads in Tasmania and England, the merchants who handle it at both ends of the route, the sailors who manage the vessel, the miners who dig the coal which makes the steam, as well as some others who have more or less to do with it before it is sold for the English boy's pennies. This could not be done were not millions of other apples shipped the same way, and vast quantities of goods made in England and sent back in exchange. This is one of the wonders of commerce.



10. NEW ZEALAND

WE are in our first great storm at sea. We had some heavy winds about southern Australia, and we thought it rough while crossing Bass Strait, but we have had nothing like this. We are now in the Roaring Forties, a part of the ocean so called from its terrible storms. Our ship has been rolling about ever since we left Hobart four days ago, and here, at the southern end of New Zealand, the water is rougher than ever. We hold to the rail, and bend to and fro to balance ourselves as we walk. When we sit, our chairs must be tied to keep them from sliding, and at every meal wooden racks are placed on the tables that our plates may not slide into our laps. Now and then our coffee spills as we try to drink it, and when the ship pitches, a spray from our soup plates sometimes spatters our neighbors.

And still the ocean is grand! The dark blue sea, tossed up by the winds, is rolling vast waves to and fro. Whitecaps are everywhere. We are rising and

falling upon green hills dotted with foam and blanketed in places with white. Great billows are chasing one another like race horses over the roads of the ocean; they roar with the thunder of a Niagara.

Now the waves meet, and the foam dashes up in a spray which the sun catches and turns into rainbows. The sun is low in the heavens, making the rainbows extend straight out from the ship. They are so close that we can almost wash our fingers in them. They come and they go; they dance in and dance out; they ride as it were on the crest of the waves; they shine a moment and then give place to others.

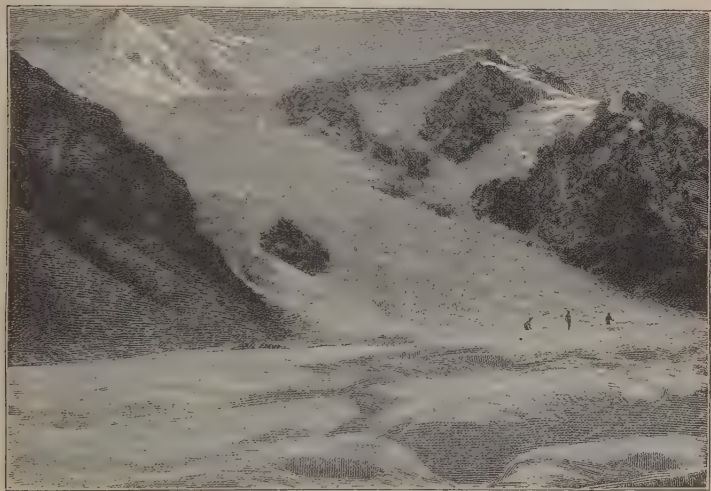
How the ship struggles and creaks! The timbers seem to be breaking as we strain our way onward. Now the clouds have swallowed the sun, and we are enveloped in mist. The fog horn blows every few minutes. Suppose we should have a collision and go down in this cold, awful storm!

Now it is night. The wind has increased, and the rolling is greater than ever. We tie our trunks fast in the cabins, and hold tight to keep from being thrown from our berths. We are tossed about all night, but the ship struggles onward. At last morning breaks, the sea is quieter, the motion decreases, and finally there is none at all. We spring out of bed and look through the portholes. We are at anchor in the harbor of Bluff at the southern end of New Zealand.

Before going ashore, let us glance at the map to see where we are. We are southeast of Tasmania, so far away that our steamer has taken almost four days to reach here. We are more than twelve hundred miles from Aus-

tralia, and it would take the greater part of a week to sail back to Sydney.

New Zealand, although its people are English and much like the Australians, is a country of itself, with its own government and its own peculiarities. It is an archipelago of two large islands and many small ones. The chief

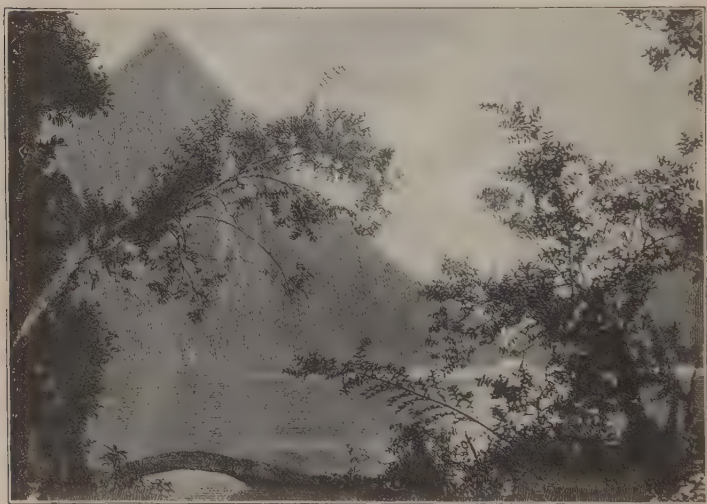


Tasman Glacier.

part of the group is like a great boot, with the sole turned toward the Equator and the toes toward Australia. It consists of North Island, South Island, and Stewart Island. North Island is the foot of the boot, South Island its leg, and little Stewart Island, opposite where we now are, is the loop through which one puts his finger to pull the boot on.

This boot is about as long as the distance from New York to Chicago, and in one place its width is almost equal to the distance from New York to Boston. North Island

is a little larger than Ohio, South Island is larger than Michigan, and Stewart Island one third as large as Delaware. All are mountainous. North Island has active volcanoes, hot springs, and geysers like those of Yellowstone Park, and in South Island are the Southern Alps, which are grander in some respects than the mountains of Switzerland. The higher peaks are clad in perpetual



"— Mitre Peak rises almost precipitously above it."

snow, and on the slopes are glaciers grander than those of Mont Blanc. The Tasman Glacier is so big that if it stood on a plain, it would make a wall of ice higher than the highest church steeple, a mile wide and eighteen miles long. The mountains have green woods to the snow line. The glaciers extend through the woods almost to the sea, and when the sun shines upon them, they make you think of great streams of silver incrustated with diamonds.

And then the fiords or rivers of the ocean extending into the land! They are long, narrow, and deep, and surrounded by giant mountains with waterfalls, glaciers, and snow fields. Milford Sound is twelve hundred and seventy feet deep; and Mitre Peak, a mighty snow-capped mountain, rises almost precipitously above it.

New Zealand has a climate like our own, save that it is warm in the north and cool in the south. It is so mild that the grass is fresh the year round. Many trees hold their leaves; many bushes, such as the holly, are always green, and the country has been called the evergreen land. The palm lily grows to a height of twenty feet, shooting out at the top in a great green tassel like the leaves of a palm. There are curious plants, crawling shrubs, and flowers of all colors.



Palm lily.

And then the ferns! New Zealand has enough to fill the conservatories of the world. In the mountains the glens are walled with them, some great trees and others as fine as a maiden's hair. There is one fern which is used by the natives for bedding, and another which is half fern, half vine. It climbs to the tops of the forests, coiling its wirelike stems about the branches. The stems hold their coil after plucking and can be used for bed springs. Think of sleeping on fern mattresses, upon fern springs, and you have one of the possibilities of this far-away land.

How about wild animals? Shall we dare go alone through the forests? Yes, New Zealand has no ferocious beasts, and its natives have become almost civilized. There are, fortunately, no snakes, and the lizards are harmless.

The birds are most interesting. Swans with feathers of velvety black fly over the lakes, and the black parson bird, which has white feathers at its throat like a parson's white necktie, sings in the bushes. There are wild ducks



Parson bird.

and wild parrots of different kinds. One is a green parrot, which prowls about at night like an owl, and there is a dull-colored one, which fastens its claws into the wool of a live sheep and tears its side open with its powerful

beak that it may get the kidney fat of which it is fond. This is the kea parrot. It has killed vast numbers of sheep, and for this reason it is much hunted by the farmers.

New Zealand has another bird which is found nowhere else. This is the kiwi, the famed bird without wings. It is about as big as a common chicken, with brown, hairlike feathers and a long, sharp bill with which it can dig down into the earth for worms. The kiwi is almost blind in the daytime, but it sees well at night. It lives in the fern beds, and when hunted hides in the crevices of the rocks.

The kiwi is supposed to be the last of the many wingless birds which New Zealand had in past ages, at which time there were some twice as big as the biggest ostrich. One species of this kind was the moa, which grew so tall that, did it live now, it could not stand upright in the ordinary school-room. It laid eggs as big as a football, with shells as thick as the cover of this book. The skeletons and eggs of such birds have been found, and we can see some in the museum at Christchurch, where we may stop on our way north.



Kiwis.



II. A VISIT TO A MEAT-FREEZING FACTORY

WE take the train at Bluff and go northward along the east coast. The land is rolling, with valleys and plains. Now the mountains are afar off on our left, and now close to the sea. We ride for miles through fields fenced with green hedges. They contain rich crops and meadows on which fat sheep and cattle are feeding. The farmhouses are small, wooden buildings roofed with galvanized iron. There are no barns, for the animals can

graze out of doors all the year round. Here and there is a haystack covered with thatch. Some of the horses have blankets to shield them from the rain.

We pass through small towns not unlike those of our country. Nearly every house has a garden about it, separated from the street by a green hedge. We stop off a day at Dunedin, a thriving city of fifty thousand people. It has all modern improvements, and is on a good harbor. From there we go northward to Christchurch, another good town of about the same size.

How rich the land is, and how fat the cattle and sheep! We thought the farms good on our way to Dunedin; but we are now on the Canterbury Plains, one of the richest parts of New Zealand and in the best sheep lands upon earth. New Zealand has many millions of sheep, enough to give more than a hundred to its every family and leave thousands to spare.

The sheep here are different, however, from those of Australia, where the climate and grasses are just suited for making fine wool. The moist air and rich vegetation of New Zealand are better for mutton, and the sheep are reared more for their meat, their carcasses being frozen and sent in cold storage chambers to England. New Zealand leads all countries in its product of mutton. It rears millions of sheep every year for the people of England, and has a fleet of steamers always sailing back and forth across the waters to and from London. Some of the ships go about South America, others about South Africa, and others through the Isthmus of Suez and across the Mediterranean Sea to Europe. The distance is great, but so many sheep are sent that New Zealand mutton can

be sold at a lower price in London than that raised in England itself.

It is a common expression that you can not get blood out of a turnip, but the New Zealanders know how to do so. Indeed, the delicious chops we have at the hotels come from turnip-fed mutton. All the way from Bluff we have been passing turnip fields, in some of which the sheep were eating the leaves and in others where they appeared to be playing ball, the cropped-off turnips looking like thousands of new baseballs scattered over the black ground. After the leaves are consumed, the sheep eat the white roots. They dig them out of the ground and bite away until nothing is left. Some farmers dig up the turnips and feed them outside, burying them in pits or mounds for food when the grass becomes scarce.

Christchurch, where we are now, has great meat-freezing factories in which the mutton is prepared for the market. We drive out to an establishment which kills about five thousand sheep every day during the season. The sheep are enticed into the factory by several old decoy sheep, which are kept to lead their brothers to slaughter. The decoys start the procession, and the thousands behind follow them up the roadway to the killing rooms, where the decoys are sent back for more.

The sheep are killed and dressed, and then frozen for shipment to England. We go with the manager into one of the freezing rooms. How cold it is! The temperature is not far from zero, and the walls are coated with snow. Carcasses of mutton hang in long rows from the ceiling. There are thousands of them here in this room. They were put in three days ago, and they are already frozen as

hard as so many stones. Strike one with your pencil. It sounds like a tap on a drum head. Take down a carcass and rest it on the floor. It is so stiff that it stands alone. It is now ready for shipment, and needs only to be inclosed in a bag of white cotton before starting on its long voyage to London.

A few moments later we ride with a trainload of mutton to the steamer and watch the men slide the sheep down chutes into the hold of the ship, which is almost as cold as the freezing room. It is kept so by machinery, and the mutton is still frozen when it is landed in England.



12. WELLINGTON—THE HOT SPRINGS COUNTRY—AMONG THE MAORIS

WE are in Wellington, the capital of New Zealand. How the wind roars around the corners and tears through the streets! The hills back of the city give but little protection, and we seem to be in the cave of Æolus, the god of the winds. Wellington is one of the stormiest towns south of the Equator. It is situated at the lower end of Cook Strait, which is so windy that it has been called the Windpipe of the Pacific. Were it not for the excellent harbor, ships could not land, and even as it is great wooden docks have been built to protect them.

Wellington has good streets, fine public buildings, excellent stores, and comfortable houses. It is here that parliament meets, and here live the chief officials of the country. New Zealand is a British colony, and as such



"We are in Wellington, the capital of New Zealand."

it has a governor appointed by the king of England. The governor, however, has not much power; the people make their own laws and elect those who execute them. In New Zealand every one votes, women as well as men. The telegraphs and railroads belong to the government, which does everything it can to help the people. It gives low rates on the railroads to laboring men, school children, and school excursions. There is a government savings bank at every post office, and when poor working people become too old to labor, the government gives them a pension.

We must not think, however, that the New Zealanders are generally poor. They are about as well off as any people on earth. Their country is one of many resources. It has rich wheat farms, stock farms, and dairies which

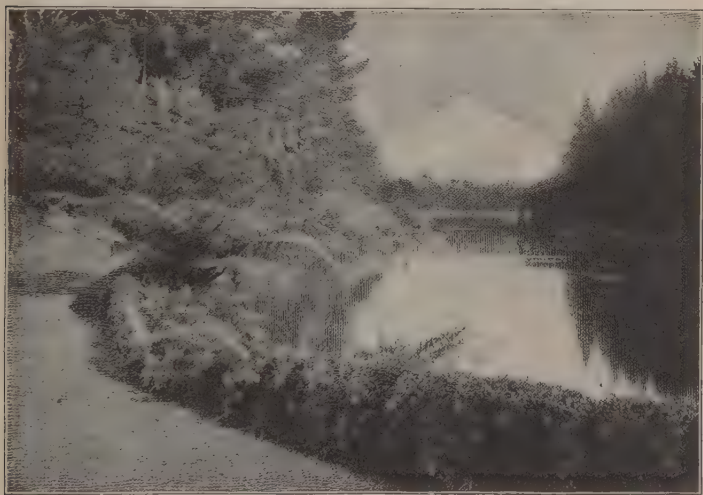
make butter for England. It has woolen mills and other factories. Coal and iron are found in the mountains, and in places along the sea the earth has flour gold and grains of gold. The gold is gathered by throwing the dirt into water, which is made to flow over tables covered with mercury or rough cloth. The gold is taken up by the mercury, or caught on the nap of the cloth, and thus saved.

New Zealand is rich in fine timber, including the kauri pine, a magnificent tree with a gray bark which grows from eighty to one hundred feet high. The kauri is used for building and cabinet work, and from its gum the finest varnish is made. The best kauri gum is like amber. It lasts after the tree dies, and great lumps of it are found in the swamps wherever the forests have been. Thousands of men go over the country with spears and picks hunting it. They thrust their spears into the earth to ascertain where the lumps are and then dig them out. Within a half century about fifty million dollars' worth of kauri gum has been sold.

We leave Wellington by sea, steaming out through Cook Strait, and then along the shores of the north island to New Plymouth, where we anchor under the shadow of Mount Egmont, one of the most beautiful of the New Zealand peaks. It is an extinct volcano almost cone shaped, its lower slopes clad with green forest and its top with perpetual snow. We do not try to climb it, but go on with our steamer to Auckland, which is the largest city of New Zealand, although Christchurch and Dunedin are almost as large. Auckland lies on an isthmus at the foot of Mount Eden, which is six hundred feet high; it is not far

from the mouth of the Waikato River, the chief stream of the archipelago.

We climb the mountain for a bird's-eye view of the country. How beautiful it is! The sea spotted with green islands stretches away on both sides of us as far as our eyes can reach. Just below lies Auckland, its



'— we anchor under the shadow of Mount Egmont.'

streets filled with traffic, and its harbor with shipping from Australia, San Francisco, the Fiji Islands, and other parts of the Pacific Ocean. Behind the city and north and south of us are rich farms and gardens, and away off in the distance are volcanic hills and mountains covered with woods.

The hill on which we are standing is a dead volcano; we are on the very edge of a crater about sixty feet deep. It is quiet now, but from this very earth once burst forth

steam, ashes, lava, and red-hot stones. Almost the whole of this island is volcanic, and it is now only a few years since a mountain, not more than a day's ride by train from where we now are, burst open and sent forth a volume of ashes and mud which destroyed the villages about it, just as Vesuvius destroyed Pompeii centuries ago. There was a lake near the mountain which was blown out, and a roaring crater, which sent up columns of steam to a height of three miles, took its place. The earth broke open, making one crack nine miles long. The sun was so hidden by ashes and dust that it became dark at midday, and there was a rain of hot water, boiling mud, and red-hot stones. This volcano is Mount Tarawera, situated in the Hot Lake district where we are going. It is quiet now, although the whole region about it is always more or less dangerous.

We leave Auckland on the cars and ride all day long through farms where fat cattle and sheep are feeding. The country is rolling and there are numerous streams. It makes us think of the grass lands of Kentucky, except where the soil has been turned up for planting. In such places lumps of lava are scattered over the fields, and in others they have been gathered up and made into fences. The lava increases as we go farther south, until at last we come into the Hot Lake region, a tract about one hundred miles long, containing two million acres.

How the earth rumbles and grumbles as our train passes over it! Steam is oozing out of the ground on each side of the track, and we tremble lest the crust may break and drop us into the bubbling, boiling, seething mass, which apparently lies not far below. We pass the

village of Koutu, which is almost hidden in steam, skirt a great lake with jets of steam bursting forth from its banks, and stop at last at Rotorua, the chief town of New Zealand's hot springs.

Here there are hotels and numerous cottages. People from all parts of the southern Pacific come to bathe in the springs for their health, and there are great bath houses containing pools of this hot, bad-smelling water.

We leave our valises at the hotel and go with a guide on foot and on horseback from one wonder to another. There are geysers of steam and water. Here is a pool of boiling, bubbling mud, which now and then shoots a column high into the air, and there is another which is always sending up what looks like paint. The earth is everywhere steaming. We step over steam cracks, and, staff in hand, follow our guide through volumes of steam so thick that we can hardly breathe.

Now we have left Rotorua and have come to Tikitere, twelve miles away. We have tied our horses and are going through the steam to where a score of great pits are sending up boiling water and mud. Look down into that whirlpool on your right! The water is black, and it steams and bubbles and spits. Be careful! If your foot slips, you may fall in and be scalded to death.

Let us go on. What a vile smell comes up with the vapor out of that pool at our feet! It has a rim of bright yellow, and its smell is like sulphur. That is a sulphur pool; we can taste the brimstone as we stoop over it. It seems full of boiling mud, and we can hardly see down through the steam.

Now the ground has changed from yellow to white; it

looks like salt. We pick up a bit of the earth and taste it. How it puckers our mouths! It is as though we had bitten into an unripe persimmon. The stuff is not salt; it is alum. There are bushels of alum mixed with the other minerals that come up from the springs. Some pools send up clouds of steam which smell like camphor, and others throw up mud or water in which are salt, potash, and various acids.



"—the steam coming through does the cooking."

Some of the springs are cooler than others and just right for bathing. They cure rheumatism, gout, sore throat, and various skin diseases. They were used long ago by the aborigines or native New Zealanders, and now the English have erected bath houses over them and built swimming vats. The Blue Bath, for instance, is as big as a city lot, and so hot we gasp for breath as we let ourselves down into it. "The Coffee Pot" bath contains a hot, thick, brown fluid, covered with an oily scum good for rheumatism, and "The Painkiller" and others are supposed to take away pain.

There are many Maori children bathing in the pools outside the bath houses. The Maoris are the native New Zealanders; they have homes in this region, living here that they may have heat without the trouble of making a fire. They build their cabins near the boiling pools, and cook their meals on the steam coming up through



"We are interested in watching the natives."

the earth in their backyards. Each woman has a steaming box of her own sunk in the earth over one of the little steam holes or in one of the pools. The box has only slats on the bottom. The food is placed on the slats, a piece of carpet or bagging is thrown over it, and the steam coming through does the cooking. Meat, eggs, and potatoes are steamed in this way, and in late years even Christmas plum puddings are thus cooked on these little volcanoes.

We are interested in watching the natives and learning

about them. The origin of the Maoris is a mystery, but scholars think they originated in India or Central Asia. They are far more intelligent and more civilized than the native Australians, and a finer people in



Maori woman and child.

every way. They have brown skins, high cheek bones, and noses much like our own. The men are tall and broad shouldered, with big hands and feet. The women are often good looking, or would be so if they did not tattoo their foreheads, chins, and lips with blue and red ink. In former times both men and women went almost naked, and they then tattooed many

parts of their bodies; but since the English came, they have adopted our clothing, and tattooing is now dying out.

When Captain Cook landed in New Zealand, there were many Maoris. They were divided up into tribes, each having its own priests, chiefs, middle classes, common people, and slaves. They had their own religion and language. The men were fishers and hunters, and the women took care of the houses, made the clothing for the family, and worked in the fields. Some were cannibals, and the different tribes were always warring upon one another.

After the Maoris were conquered by the English, they embraced Christianity, and they are now nearly all Christians. They have their own schools, and live in villages on reservations in the two larger islands. They are governed by chiefs, but are also subject to the laws of New Zealand.

13. NEW CALEDONIA AND OTHER FRENCH ISLANDS

WE have left Auckland and are on our way to New Caledonia, a large island belonging to France, about seven hundred miles off the eastern coast of Australia. The weather has been growing warmer ever since we left Auckland. We are sailing over summer seas in a climate similar to that inside the Great Barrier Reef. We pass Norfolk Island, an unimportant possession of England, go by atolls with cocoanut palms growing upon them, and as we approach New Caledonia, steam slowly to avoid the coral rocks and reefs which almost surround it. The reefs are a few miles out from the shore, many of them reaching not quite to the surface. The captain consults his chart every few minutes, and he almost stops the engine as we go through an opening in the reef, which leads to the beautiful harbor of Noumea (nōō-mā'ā), the capital of New Caledonia.

Noumea lies on the western side of the island, right on the sea, with high mountains rising behind it. Its little houses are of wood roofed with galvanized iron; many of them have wide porches and are well shaded by palms and other tropical trees.

The French officers come out to the ship and look us over before giving us permission to go upon shore. New Caledonia is a convict settlement, and visitors are carefully watched. Thieves and other criminals from France are sent here for punishment; they are made to work, guarded by soldiers, and the island is under military rule. The

very worst criminals are taken to the Isle of Pines, a little coral spot on the sea about thirty miles southward, where prisoners can not escape except by boat. The other convicts are scattered over New Caledonia, some in penitentiaries, but more at work on farms and in the houses. Many convicts by diligence and good behavior have earned



" Noumea lies right on the sea."

the right to have farms for themselves, and some remain on the island after finishing their sentences.

We spend a while in Noumea practicing our French on the storekeepers, changing our shillings and pence into francs and sous. We buy some of the curious weapons used by the natives, and enjoy the bananas, pineapples, oranges, and cocoanuts, which cost so little that we can get all we want to eat for a very few sous.

We call upon the governor, and by his assistance make

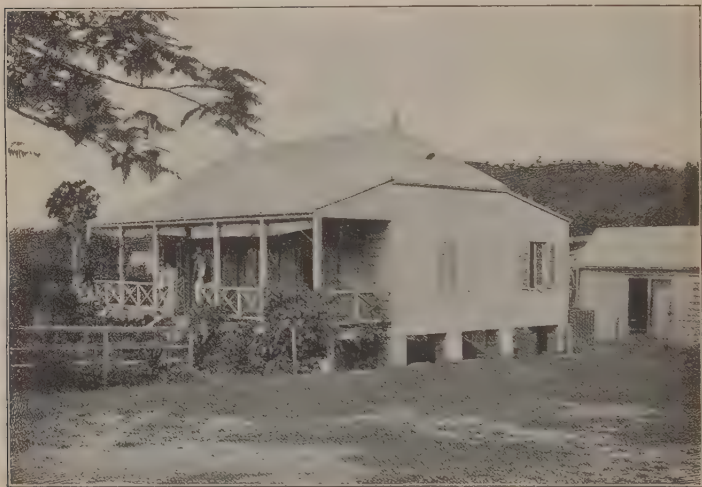
a trip into the interior, going from village to village visiting the natives. We learn that New Caledonia is quite large. It is as wide as Porto Rico, and more than twice as long.

Noumea has many native tribes; some of them are of the Papuan Race, of which we shall see more as we go on with our journey. The Papuans inhabit New Guinea and many of the smaller islands of the Pacific. They are far different from the Australians, and not at all like the Malays, from whom come our little brown cousins of the Philippine Islands. They have dark faces, frizzly hair, and in features are more like negroes than white men. They wear but few clothes, some of them going almost naked.

The different Papuan tribes vary somewhat in appearance and customs. Here in Caledonia they are hospitable and quiet among themselves, although they have frequent wars with their neighbors. Each tribe has its chief who acts as ruler and leads in its wars. The people live in villages of circular houses, each of which has a top like a cone. The houses are made of wood and thatched with grass and leaves. They have narrow doors and no chimneys, so that when we visit them the smoke makes our eyes smart. We ask one of the chiefs why he does not have chimneys; and he replies that the smoke does no harm, and it keeps out the mosquitoes.

We learn that the island has excellent timber, including the kauri and other pine trees which we saw in New Zealand. There are mines in the mountains not far from the coast, which yield coal, iron, and copper, and also nickel and cobalt used for plating iron and other metals. In the lowlands the French have established sugar, tobacco, and

coffee plantations, and rice and corn are also grown. They have pretty little one-story houses of wood roofed with galvanized iron. They have large pastures and fine cattle and sheep. The island is healthful, and were it not for the convicts, it might make a pleasant home.



"They have pretty little one-story houses of wood roofed with galvanized iron."

The French own also the Loyalty Islands and some islets not far from New Caledonia; but their population is small, and they are not of enough importance for us to go out of our way to look at them.

We shall not be able to visit the Society Islands, the Marquesas (mär-kā'sās), and the many other little islands which form the Paumotu (pä-ōō-mō'tōō) and other archipelagoes lying in the Pacific Ocean northeast of New Zealand. These islands all belong to the French, and they are governed by a French governor who lives at

Papeiti (pa-pā-ē'tē) in Tahiti (tā'hē-tē), the largest of the Society Group.

These French islands are of but little importance. Their only export of value is copra or dried cocoanut meat, which is extensively used in soap making, and their people are few in number and rather lazy than otherwise. They are not unlike the natives of the Samoan and Tongan islands, among whom we shall travel later on. They have dark brown complexions, broad noses, rather thick lips, and beautiful teeth. The men are tall and well formed, and the women are fine looking. They were formerly cannibals, but many of them are now Christians.

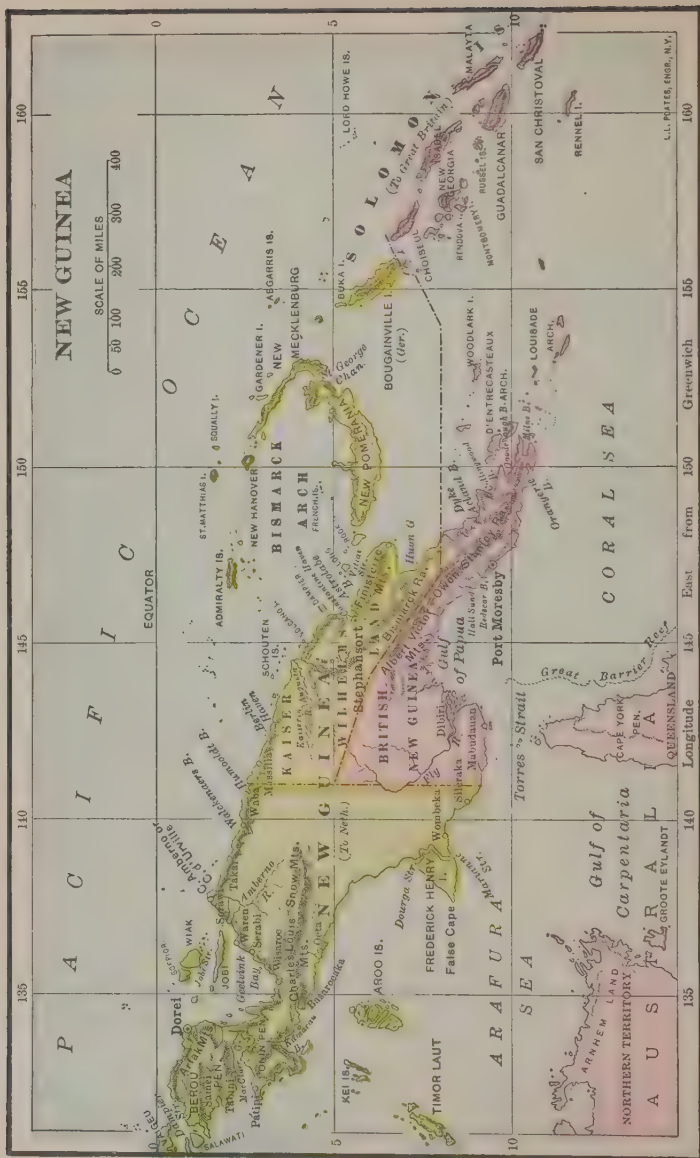


14. NEW GUINEA

CONSIDERING Australia a continent, New Guinea is, next to Greenland, the largest island on the globe. It is longer than the distance from New York to Omaha, and its width in places is as great as the distance from Boston to Washington. It would make more than seven states the size of Kentucky, and about thirty-eight as big as Massachusetts.

Turn to your map and look at it. What is it like? A crocodile? Yes, a little; but more like a gigantic bird squatting on the Arafura Sea and Torres Strait, its island-feathered tail extending eastward into the Pacific, and its ragged head about to swallow some of the islands of the Malay Archipelago.

This vast country was discovered by Menezes, a Portuguese navigator, in 1526, only thirty-four years after



Columbus discovered America, but for centuries it lay unexplored and unclaimed. In 1848 the Dutch, who had been surveying the coast, took formal possession of the western portion of it, and in 1884 the English and the Germans claimed the remainder. The Dutch have now the lion's share, or the whole western half of the island; while of the remainder, the southern part belongs to the English and the northern part to the Germans. Each nation is gradually exploring its territory, and in time we shall learn all about the country and its people.

At present we only know that it is a wild land of high mountains, great rivers, and low, fever-laden plains. The Charles Louis Mountains in Dutch New Guinea have peaks so high that, although they lie close to the Equator, they are clad in perpetual snow. They are said to have the highest peaks between the Himalayas and the Andes. The Bismarck range in German New Guinea is almost as high, and there is one peak in British New Guinea which is more than thirteen thousand feet high. Each country has great rivers which have built up vast deltas and plains. The Fly River in British New Guinea is a mighty stream up which boats have gone for more than six hundred miles.

Nearly all of New Guinea is covered with forests. The vegetation is so thick that it would take us months to make our way through it from one side of the island to the other. The trees are much the same as those we saw in Australia, but so dense that their leaves shut out the sun, and so bound together with creepers and rattans that one has to cut his path from one place to another.

There are many poisonous snakes in the forests, and also savage tribes hostile to white men. The dangers are so many and travel is so difficult that we shall confine our journeys to Port Moresby and the country about. Port Moresby is the capital of British New Guinea, and we can there learn all that is known concerning the island.

In coming to New Guinea from New Caledonia we are in the coral seas all the way. The Great Barrier Reef extends almost to New Guinea, and that island itself has a coral reef guarding its coast. We make our way through a break in the reef, and wind in and out through coral gardens to a beautiful harbor, almost surrounded by hills. There is a collection of wooden buildings and native huts on the shore. They are Port Moresby, the chief town of New Guinea and the home of the English governor.

We go to the Government House, built on a commanding site at the eastern end of the harbor, and have delightful chats with the different officials. They tell us that the exploration of the island is going rapidly on, and that the different governments are beginning to develop their territories and civilize the natives. They are finding gold in the mountains and along the Fly and other rivers; they are setting out cocoanut groves and rubber forests, and are planting tobacco and cotton.

We learn that the natives are very fond of tobacco, and that they use sticks of tobacco as money. The sticks are as long as a lead pencil and a little bit thicker. They are composed of the strongest tobacco leaves coated with a sweet mixture, which makes them stick fast. In some villages four sticks is the pay for a day's work, and a certain number will buy a hatchet, a knife, a fish net, or

a necklace. They are taken and given in trade at the stores of Port Moresby.

The natives of New Guinea are very interesting. They are Papuans, but differ greatly according to the tribes to which they belong and the parts of New Guinea which they inhabit.



Natives of New Guinea.

Some of them are said to be cannibals, but in general they are good people, affectionate among themselves, and easily ruled by the foreigners. They are more intelligent than the native Australians, although very superstitious, believing in witches and ghosts. The most of the tribes worship a great spirit who, they think, lives in the mountains.



"The girls have petticoats of grass."

We see natives about Port Moresby wearing clothes much like ours, but they are the students of the mission school. The officials tell us that the people of the wilds wear almost no clothes whatsoever. The women and girls of some tribes have petticoats of long leaves, grass, or strips of bark

strung together and bound about the waist in flounces, layer on layer. They have also necklaces of shells or metal, and the skirt and necklace, with a coat of tattooing, often forms the whole costume.

The native men wear even less than the women. Many a one has only a necklace and bracelets and a bit of cloth about the waist, with perhaps a bark belt or two, ten inches wide, bound around the body. The belt is usually tied very tight, compressing the waist like a corset, so that even though the man be full grown, his waist is exceedingly slim. We ask the reason for such a custom, and are told that the men want the women to think they have small stomachs and are therefore small eaters. The woman provides most of the food, and a young woman who is looking about for a husband naturally chooses the man who eats least. A boy on being asked why he laced himself so tightly, said, "I do so because when I am older I must get me a wife, and if I have a big stomach, no one will have me." It is said that some of the tribes think it a disgrace for men to be fleshy, and the braves do all they can to keep lean.

In eastern New Guinea the men tattoo their bodies and faces in hideous fashion. In some tribes the women are tattooed all over, the ink being pricked into the skin with thorns. The thorn is dipped into the ink and then driven through the skin with a little mallet. Such dressmaking is slow, but a suit once made lasts a lifetime.

Each tribe has its own way of combing the hair, and the headdress often indicates the state of the man or woman who wears it. For instance, you may know whether a woman is married or single by a look at her head, for girls

shave their heads close to the scalp upon being wedded, and keep it so shaved for the rest of their lives.

The men of some regions dress their hair so that it stands out all over the head, and in others they thread the hair through many little bamboo tubes or pipes, so that it looks like great tassels.

Many natives pierce their ears, and some thrust sticks and other ornaments through their noses. Indeed, the odd customs are as many and as different as the tribes, and this is so not only in dress, but in the manner of living.

In some villages the men dwell in clubhouses and the women in huts off by themselves, a number of the latter often being in one hut. The women cook the food in the huts and bring it to their husbands at the clubhouse. There they lay it on the porch, for women may not enter the clubhouse, nor do they eat with their husbands. These clubhouses are of great size. They have a sort of ridge roof thatched with straw or leaves, which makes them look like immense hayricks. There are no windows, and the smoke gets out as it can.



"These clubhouses are of great size."

In parts of New Guinea the men and women live together in apartment houses. Such a house may be five hundred feet long and sixty feet wide, and may contain as many as fifty families. It is divided up by little partitions into stalls or pens, opening upon a central hall. Each family has its own stall; in it the cooking is done, and there all sleep at night. The apartment houses are



"— the boys play leapfrog and games."

made of a framework of poles, roofed with grass or the leaves of palms and bananas.

We are delighted with the native children. They have their own sports. The girls have odd-looking dolls, the boys play leapfrog and games, and altogether they have as much fun as we do at home.

One of the oddest things in New Guinea is the cradle, which is made of the fiber of the banana plant knitted into a bag. The baby is put in the bag and hung to a pole in the roof or in a tree outside the hut, and swung off to sleep. When the mother goes away, she merely unties the string and throws the cradle, baby and all, on her back and walks off with it.

Many of the native tribes devote themselves to hunting

and fishing. Some make pottery for sale, and others have little farms where they raise sweet potatoes, yams, bananas, and other tropical fruits. The people live largely upon vegetables, but in many respects are much the same as the Australians, eating game and fish, and also snakes and lizards, and worms which they find in the trees.

New Guinea has about the same wild animals as Australia. It has ant-eaters, kangaroos, wallabies, wild pigs, and dingos. It has alligators and turtles, and sharks swarm the coasts. It has ten species of snakes, many ants, and an insect whose bite produces sores like pimples. It has gorgeous butterflies and the most beautiful birds of the world.

The birds of New Guinea are wonderfully interesting. We see some in the woods not far from Port Moresby, and pigeons of various kinds in the settlement. The Goura pigeon is almost as big as a hen turkey, and it is more beautiful than a peacock. Its body is of a brilliant light blue; its neck shines like an opal, and it has a crest of tiny blue feathers running high up from the back of its head which, when the sun touches it, shines as though it were set with jewels.



"One of the oddest things is the cradle."

And then there are the tiniest humming birds, more brilliant than our humming birds at home. There are red birds and parrots of most gorgeous colors. There are cassowaries as big as young ostriches, with hairlike feathers resembling brown strings, and with feet so strong that a kick would break the skull of a man. We see a young cassowary, which has been tamed in Port Moresby, but are told that it is not a safe pet, for it eats the buttons from the workbasket, and it is by no means certain that it may not take a bite out of the kitten or peck at the baby.

The most beautiful of all birds, however, is the bird of paradise, of which many varieties are found in New Guinea. This bird is comparatively small, but its feathers are beautiful. The golden bird of paradise has six long feathery tips on its head, and a great crest or crown, which rises out of the middle of its back, forming a canopy over it. Others of these birds have bright red feathers with velvetlike plumes encircling the base of the head, and tail feathers which stand up like wires. The feathers are so fine that they are sent to Europe in great quantities for hats and bonnets.



15. KAISER WILHELMS LAND AND SOME GERMAN ISLANDS OF THE PACIFIC

AS we go on from island to island, we shall learn that almost every important group in the Pacific Ocean, with the exception of Japan, belongs either to the United States or one of the great nations of Europe. We have seen the vast possessions of the English in Australia and New Zealand and also in New Guinea. They have other

islands in the Pacific just to the east of us, including the Fijis, the Tongas, and many others farther away. We learned something of what France owns during our stay in New Caledonia, and now we are about to see some of the German possessions.

Leaving Port Moresby by steamer, we make our way to the eastward, sailing in and out among islands about the tail of New Guinea, and then coasting northward until we come to Kaiser Wilhelms Land and the Bismarck Archipelago. These possessions were acquired when Wilhelm I was the Kaiser or German Emperor and Prince Bismarck was his prime minister, and so in their honor they were named after them.

The voyage is through coral seas all the way. There are many gulls flying over our ship, and now and then we see flying fish darting over the waves. Near the atolls sharks are swimming, and great tortoises float about in the water. We pass many low islands with cocoanut palms growing upon them. The coral reefs continue along the coast of Kaiser Wilhelms Land and also about New Pomerania and other islands of the Bismarck Archipelago.

Our first stop is at Stephansort, the government settlement of German New Guinea at the northern end of Astrolabe Bay. There is a steamer in the harbor loading pearl shells, coffee, and cotton for Hamburg. German officers come out to our ship, and on landing we find that almost all the white people are Germans. The town, however, is small and chiefly inhabited by officials and men engaged in trading or in managing the coffee, cotton, and rubber plantations, and the cocoanut groves which are found near the coast. Some are interested in gold mines

in the Bismarck Mountains, the peaks of which we see far back at the south.

The natives here are much like those we saw at Port Moresby, save that they are if anything more wild and less anxious to work. Planters tell us that they have to import laborers from the islands near by and elsewhere to work the coffee and cotton.



"Many of the houses are built upon piles."

Many tribes along the north coast, where it is so hot, go almost naked, although they may paint or tattoo their bodies or give them a coat of grease. Some wear bright feathers in their heads, and bracelets and necklaces of shell. Many of the houses are built upon piles so high up that the people have to climb ladders to enter them. In other places there are houses in the trees for watchmen, and also for refuge in time of attack.

It is but a short trip from Kaiser Wilhelms Land to the Bismarck Archipelago. We first visit New Pomerania, and, making this our headquarters, coast about from one island to another. The Bismarck Archipelago, like New Guinea and other islands of this region, is largely volcanic. New Pomerania has active volcanoes, and every now and then the people hear the rumble of an earthquake, so that



"—there are houses in the trees."

one can never be sure he is safe. In 1878 a volcano suddenly burst out of the water in one of the bays, and ten years later Volcano Island was almost swallowed up by the sea, an earthquake producing a tidal wave which killed two German explorers who were then on the west coast of New Pomerania. The natives of these islands are Papuans. They are the same kind of people we saw in New Guinea, and in some ways even more wild.

Leaving New Pomerania we visit the Solomon Islands lying southeast of the Bismarck Archipelago, some of which belong to the Germans and others to the English. Bougainville, the largest island of the group, is larger than



Solomon Islander.

Porto Rico, and it has two active volcanoes and one mountain more than two miles in height. The islands are beautifully wooded, having tree ferns forty feet high, palms of many kinds, banyan trees, as well as forests of sandalwood and ebony.

The natives here are not so tall, as a rule, as the people of New Guinea. They are Papuans of a deep brown color. Many of them

go about naked, save that they have bracelets and girdles some have sticks in their noses and great plugs or rings in their ears. All have queer ways of combing their hair, the men sometimes wearing it in cones on the top of the head; they also stain the hair red or light brown with lime or different kinds of earth.

Some tribes are hunters, and in the mountains there are men who go hunting for human heads. The people think that the man who commits the most murders in this quest is the bravest and noblest.

Some of the Solomon Islanders have farms and raise bananas, sweet potatoes, taro, and other vegetables. Taro is a food plant which we shall find throughout the South Sea Islands. Its chief value lies in its root, which makes us think of our sweet potatoes or yams; it is eaten boiled, baked, or roasted; it is also made into bread and puddings, and in the Hawaiian Islands is ground into a mush called poi.

These people are good fishermen and, like the natives of other islands of this part of the world, they dive for pearls and shells, and sell them to the owners of vessels which trade from island to island.

They also catch the huge turtles found in rocks along the coast. The turtle shells are often sold to traders who export them to Europe, where they are made into combs and other things.

The natives dive down into the sea after beche de mer, a gigantic sea worm or slug, so much prized as food by the Chinese that it is shipped in vast quantities to China every year. These slugs are sometimes called the cucumbers of the sea, because they look like cucumbers as they lie in the water. They are found upon the coral reefs, and are obtained by diving or are picked up at low tide. The slugs



Taro plant.

are gathered in sacks by fishermen, after which they are boiled and then dried in the sun. When well dried, they are bagged up and shipped off to China, where they are used to make a favorite soup. Gathering beche de mer, pearl shells, and turtles is common in almost all the islands of this part of the world, these articles all being of great commercial importance.

In addition to the Bismarck Archipelago and the Solomons, Germany has a vast number of smaller islands, some volcanic, but mostly coral, scattered over the Pacific Ocean both north and south of the Equator. She is neighbor to our possessions in the Samoan Group, where she owns more territory than we do. The Admiralty Islands, just north of Kaiser Wilhelms Land, belong to Germany, and also the Marshall Islands, the Ladrões, and the Carolines north of the Equator. Some of the Carolines are not far from the Philippines, and our little island of Guam lies between them and the Ladrões which belong to Germany.

The Carolines comprise many atolls and five little volcanic islands. The natives are gentle and intelligent, more so, perhaps, than the inhabitants of the Ladrões farther north. The word "Ladrone" means thief, and Magellan gave it to these islands because of the thievish tendencies of the natives. It is said the people are better to-day.

Most of these German islands, however, are little more than patches of coral on the face of the sea. Some of them yield small amounts of pearl and tortoise shells, others grow cocoanuts; but as a whole they are of no value to commerce. Their natives are of a low grade of civilization, and so few in number that it will hardly pay us to go out of our way to visit them.

16. THE FIJIS AND OTHER BRITISH POSSESSIONS OF THE PACIFIC

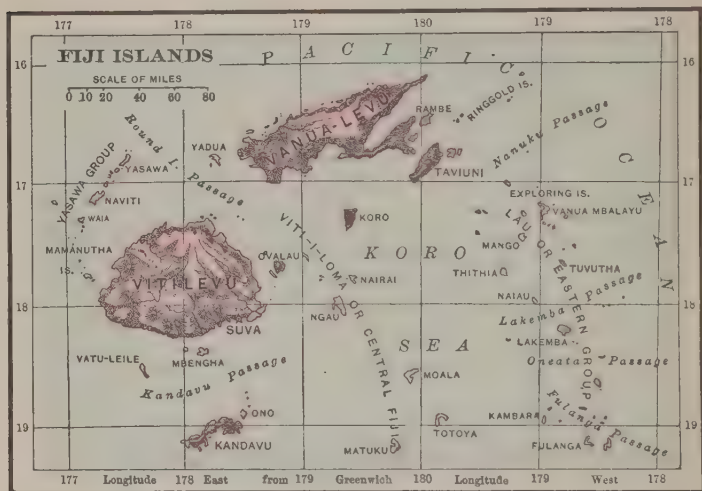
THE English are a great colonizing nation. Their country in Europe is small; but by discovery, conquest, and peaceful annexation they have acquired possessions in all parts of the globe, including many of the islands of the Pacific. We steamed through coral groups belonging to them on our way about New Guinea, and found their flag floating over the southern part of the Solomons. The English own also the Gilbert and the Ellice islands, composed of atolls lying north and northeast of New Guinea; the Fanning Island south of Hawaii, noted for guano; the Cook Islands, which might be called the sisters of the Society Group; the Tongas, not far from the Fijis, and many islets scattered here and there over this sea.

All of these possessions are ruled by the governor of the Fiji Islands, who has the title of High Commissioner of the Western Pacific. He is appointed by the king of England, and has his capital at Suva on the island of Viti Levu (vē'tē lā'voō) or "Big Fiji," the largest of the Fijian Group. Many of the islands are ruled through their chiefs, who are advised by the English officials. The Tongas have a king of their own and a legislative assembly, half of whose members are elected by the people, although they are under British protection.

The Fijis are the most important of all these small English islands. They lie about twelve hundred miles north of New Zealand. They are volcanic islands rising

steeply out of the sea, each having a coral reef about its coast, so that it might be considered the head of a mountain with a necklace of coral.

There are more than two hundred such islands, the group having an area as large as Massachusetts. Only



eighty of the islands are inhabited, and many of these are so small that there is but one village upon them. Most of the people live on Viti Levu, which is about the size of Connecticut, and Vanua-Levu (vā'nōō-ā-lā'vōō), more than twice as big as Rhode Island.

Our trip from the Solomons to the Fijis takes several days; but the sea is smooth, and we are able to gather information about them while on the way. They were discovered by the Dutch in 1643, but were not thoroughly explored until Captain Charles Wilkes of the United States navy sailed about them in 1840.

At that time and for years thereafter the inhabitants were ferocious cannibals, who considered human flesh the greatest of delicacies. The different tribes made war upon one another, and each sent out canoes to the neighboring islands to secure captives for their feasts. Slaves were kept and fattened for food, and upon rare occasions a man might sacrifice his relatives and friends.

This was the condition when the missionaries first came to the Fijis. They had great trouble at first ; but they made many conversions, and at last converted the king, and with his aid the rest of the people, so that to-day the Fijians are almost all Christians. There are more than a thousand churches on the islands, and most of the natives attend them, and there are about thirty-three thousand children in the Sunday Schools. The Fijians have their own native preachers, and a common sound evening and morning is the hymn sung at family worship. The barbarous customs have been done away with, and civilization has taken their place. Schools have been established, and nearly all the natives can read and write. Many have farms, and they are among the happiest of the Pacific peoples.

There are several thousand Englishmen now living in the Fijis, and also a large number of East Indians who have been brought in to work on the plantations. Fijians do not care to labor more than is necessary to support themselves, and this in a land where one can live on breadfruit and bananas is not much.

The islands have quite a trade with New Zealand and other countries. The English raise sugar, tobacco, tea, rice, and tropical fruits for export ; they also sell copra or dried cocoanut meat, pearl shells, and *beche de mer*.

We are approaching the Fijis. Great masses of green dot the sea in different directions. Now we are nearer, sailing along Viti Levu. The hills rise up from the coast, and low-hanging clouds are resting upon them. Notice that strip of light green dividing the deep blue waters outside from those close to the coast. That marks the coral reef where the water is shallow. The town on the beach is Suva, the Fijian capital. You can see its buildings under the cocoanut trees which border the shore.

Now we are going into the harbor through a funnel-shaped entrance. Our steamer moves slowly, avoiding the native boats which are shooting hither and thither. What queer things they are! Look at this one at the right of the steamer. It has a three-cornered sail, made of matting, and an outrigger, a cocoanut log floating in the water outside the boat and tied to it with bamboo to keep it from turning.

See the men in the boat! They have frizzly hair and skins of a mahogany brown; but they are tall and fine looking. How their muscles swell as they work their way through the water! They are Fijians. Listen! they are calling out a welcome to us, but the commotion on board is so great we can not understand them.

Now we are in the harbor coming up to the pier. There are boats large and small all around us, and we anchor side by side with German, English, and American steamships which are here to trade with the Fijis.

We take a stroll along the Victoria Parade, the chief street of Suva, make a call upon the governor, and then go to the hotel, where we enjoy a land meal after our long stay upon ship.

There are many natives in and about Suva. Most of them speak English, and we take several for guides and interpreters during our travels over the islands. We go much of the way upon horseback, for there are bridle paths almost everywhere, and we can travel easily and safely through this once cannibal land.

We ride along the coast where the brown-skinned Fijian girls are fishing on the coral reefs and bringing their catch to the shore. The fish are of all colors; some are almost as gorgeous as the birds we saw in New Guinea. There are green fish and pink fish, gold fish and silver fish, and fish the color of sapphires and rubies.

These seas are noted for their animal life. The coral gardens have crabs of many kinds. They have star-fish and an indescribable variety of sea monsters. Some of the coral patches are almost real gardens in their profusion of shrubs, bushes, sprigs, and sponges of coral. Some coral is pink, some blue, and some lavender. We gather specimens and lay them away, but they lose their beauty after being well dried.

Our trips into the interior are even more delightful than those along the shore. We travel through woods where the trees shade us from the tropical sun, and now and then stop to rest under a great umbrella fern, lying on the beds of ferns underneath. The ferns of the Fijis are even finer than those of New Zealand. There are birds'-nest ferns clinging to the boughs of old trees, and climbing ferns which hang down from the branches and trunks. The Fijis have beautiful pines and flowering trees, where we see red and green parrots peeping out through the blossoms.

There are also poisonous plants, such as the tree nettle, which has glossy leaves with red and white veins. When touched, they sting one so that the pain lasts for days. And then there is the tree called the itch plant, whose



Fern trees.

sap is somewhat like milk, and if it touches your skin, causes terrible pain; it will make your body break out into sores which will last a long time.

Everywhere we go we see little farms cultivated by the natives. There are fields of bananas, sweet potatoes, taro, and yams, and of rice, sugar cane, and Indian corn. Many of the fields are in

terraces, or steps one above the other, irrigated from the streams by pipes of bamboo.

We rejoice in the pineapples which are brought from the fields for us, and in bananas fresh from the stem. The natives invite us into their homes, and frequently ask us to stay over night. Their houses are not large, but they are beautifully made. They have walls of reeds coated with dried leaves and covered by a heavy thatched roof, upheld by tree trunks set into the earth. The ordinary

house has but one room, with an opening at the front covered by a mat which serves as the door. In the center is the fireplace, a hole cut out through the floor with a scaffolding over it, upon which food is hung to be cooked. The most of the cooking is done in earthenware pots. There are no chimneys, and the smoke colors everything black. Wooden bowls, cocoanuts, and gourds are the chief kitchen utensils.



"Their houses are beautifully made."

There are no chairs in most of the huts. The family and friends lie around upon mats spread upon a layer of soft grass. These mats are also the beds, the best of them being upon a slightly raised portion at one end of the room, where, as guests of honor, we are allowed to sleep.

For the first night or so, we try the Fijian pillows. They are little logs of bamboo on legs just high enough

to fit under the neck and raise the head off the floor, but so hard that they make our necks stiff; so we roll up our coats and use them instead.

It is very warm in the Fijis, and the natives of the interior wear little clothing. They are modest, however, and



"— we are treated to a feast of roast pork."

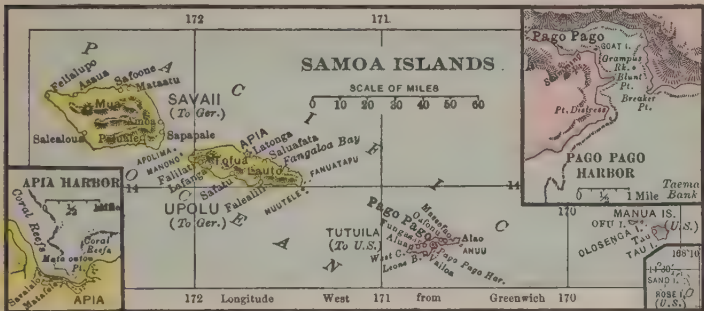
are careful how they treat one another. They are cleanly, and have wooden bowls of water at the doors of their houses, so that one may wash his feet before stepping upon the white mats. We always take off our shoes when we visit our native friends in their homes, although they politely protest.

We carry canned stuffs with us to vary the diet of yams, taro, breadfruit, and bananas, which are the chief food of the natives. At some villages as a great honor we are treated to a feast of roast pork. Pigs are found through-

out the Fijis, and their flesh is considered a great delicacy. The pig is first killed and cleaned. It is then roasted whole by filling its inside with red-hot stones and laying it in a little pit lined with more hot stones, and covering it up with grass and earth. This forms a natural bake oven quite as good as one made of iron or bricks.

17. SAMOA

HIP, hip, hurrah! Our cheers ring out over the water. We wave our handkerchiefs and throw our hats high into the air. We are in the harbor of Pago



Pago (päng'gō päng'gō) on the Samoan Island of Tutuila. Don't you see that American gunboat at the wharf and the dear old American flag waving from the building behind it? This island belongs to us! Those shores covered with palm trees and the wooded hills rising up almost to the clouds on every side are American soil; and the half-naked girls and boys who are rowing their boat loads of vegetables and fruit out to the steamer are

our brown-skinned Samoan cousins, who pride themselves on belonging to the same Uncle Sam that we do.

The United States has four little inhabited islands, besides several smaller islands, away off here south of the Equator in the middle of the Pacific Ocean. Their names are Tutuila (tōo-tōō-ē'lā), Tau (tā'ōō), Ofu (ō'foo), and Olosenga (ō-lō-seng'gä). They are very small islands,



"The harbor is more like an inland lake than a bay."

all together not much larger in area than the District of Columbia, but they are of the greatest value, because they lie on the track of the steamers going from San Francisco to New Zealand and Australia; and when the Panama Canal is completed, they will be near the track from there to Australia and Malaysia, and perhaps on the nearest route around the world by the Panama and the Suez canals. For this reason we need them as a coaling and naval station.

On long journeys steamers require frequent supplies of coal, and it is important for us to have good harbors along the way where our merchant ships can be supplied in time of peace, and where our naval vessels can coal should there be war.

Pago Pago has one of the very best harbors of the middle Pacific. It is about two miles long and a third of a mile wide, and is of the shape of a crookneck squash, with the small end at the entrance. The harbor is more like an inland lake than a bay. On either side of it rise steep hills, covered with a dense vegetation, which shut out the winds and the sea; and it is so deep that the biggest ocean steamers can float here without danger.

But the canoes are now close to the steamer. The boys and girls within them are shouting their welcome to us. They are calling "Talofa! Talofa!" The words mean "Love to you," and love is the greeting we shall hear all over the island. The Samoans are the best of all island peoples. They are noted for their bravery and for their good nature. They are almost always smiling and are friendly to strangers.

The boys are big, strong, and muscular, and the girls are plump and well formed. Their skins are the color of ripe chestnuts. They have beautiful eyes, and their hair is wavy rather than frizzly like that of the natives we saw in New Guinea. They wear more clothing. The girls have skirts of wide strips of calico, which are wound about the waist, falling almost to the feet; they have sashes or jackets about the upper parts of their bodies, although their arms are frequently bare. Nearly every one has flowers about her neck and in her hair, and even the boys wear garlands of flowers.

The Samoans are Polynesians. They are of a different race from the Papuans, having finer forms and a higher grade of civilization. The Polynesians are found in many islands of this part of the ocean, not alone in Samoa but in the Tongas, in the Society Islands, and other groups of that neighborhood, and also in Hawaii, as we shall see later on.

We throw ropes over the sides of the ship, and our brown-skinned cousins, girls and boys, climb up to the deck with their baskets and bundles. We buy their pineapples, bananas, and oranges, and as they throw wreaths of flowers around our necks, we laugh with them and cry out, "Talofa! Talofa!" in return.



Samoan girls.

After a while we leave the ship for the shore, and go far back into the country to visit the people in their villages. The houses at first sight look like

haystacks upon posts. They have enormous thatched roofs, upheld about the edges by the trunks of small trees with a larger tree or so in the center. They are open at the sides or fitted with mats which can be let up and down, serving for walls.



"The houses look like haystacks upon posts."

The floor is the earth covered with little pebbles upon which mats are laid. Here the people sit or lie in the daytime, and here they sleep at night, using wooden pillows not unlike those of the Fijians. A fire is kept burning at night in a hole in the center of the floor for light and also to keep away mosquitoes.

Our cousins say "Tofa," or "Sleep well," as they bid us good night and we lie down upon the mats, the pebbles below reminding us of the princess in the fairy tale who felt the pea under her many feather beds, save that the peas under us are as large as hazelnuts and make us sore however we turn.

At daybreak we go out for a bath before breakfast. The Samoans are cleanly, and they are always splashing about in the streams. We run down to the shore and roll about in the warm water with our little brown cousins,

and then help them catch a few fish for breakfast. In the meantime others of the family have brought in some sweet potatoes, taro, bananas, and a couple of chickens. The potatoes and meat are cooked on the hot stones of a native oven, and the meal is served with banana leaves as plates, a plan that is very convenient for such a large party. There are no knives or forks, but we soon learn to eat with our fingers, although not so daintily as our friends who have eaten so all their lives.

While we stay in each village we are taken about by the Taupo, or village belle, whose duty it is to entertain strangers and see that they have all that they want. This girl is usually the daughter of one of the chiefs, noted for her grace, beauty, and wit. She is the leader of the local games and sports, and has a prominent part in all village processions.

Before we depart, a council is held with some of the chiefs, during which we are treated to kava, a drink used on social and ceremonial occasions. It is made from the root of a shrub of the pepper family which grows in these islands, and is prepared in a curious way. There are special bowls for mixing the drink and odd ways of reducing it to a powder. The custom in many places is to pound it up on flat stones; but the old way, which the natives say is much better, was to cut it into little cubes and then have the girls chew it. After pounding or chewing, the kava is put into the bowl and covered with water. It is then kneaded with the hands under the water until the juice comes out, when the liquor is strained off and is ready for drinking.

Kava, when ready to drink, has a milky appearance. It

tastes somewhat like soap suds, and we can scarcely drink it at first, but later find it cooling and refreshing. It is not intoxicating unless taken in large quantities, when it affects the legs more than the head, so that the drinker may be perfectly sensible, although unable to move.

We are interested in the government of the Samoan villages. The country is ruled by the United States, but our officials are chiefly advisers. Every village is a little republic with its own chief who settles everything under the direction of the American governor. The people are intelligent and well behaved. They have their own schools and churches, having been converted by the missionaries long before we took possession of the islands.

Many of the Samoans have little farms upon which they raise sweet potatoes, taro, yams, and other vegetables. Some have banana fields and cocoanut trees, from whose nuts comes the copra which is the great money crop of the islands. Copra is the dried kernel of the fully ripe cocoanut. The cocoanuts are gathered when they fall and the husks taken off. Then the shells are broken, and the kernels are cut into strips and dried in the sun.



"The cocoanuts are gathered when they fall."

This dried cocoanut meat is of great value in commerce, and we shall find the natives preparing it on all the islands of this part of the world. It is shipped to the United States or Europe, where a rich oil is pressed out of it, and this oil is used to make soap and other things. Here in Samoa the natives pay their taxes with it, each village sending in to the government a certain amount of copra a year.

The Samoans have but few manufactures. The women weave mats out of fine grasses, they beat the bark of the paper mulberry tree into a kind of cloth, and make ornamental straw and basket work. The men carve out clubs and models of canoes, and some of them go fishing for pearl and tortoise shell. Altogether the islands are of little commercial importance, and their great advantage to us, as we have already learned, lies in the harbor of Pago Pago.

Nevertheless we thoroughly enjoy our visit with our new relatives of the southern Pacific, and we feel sad as we stand at the stern of the steamer, our necks and hats decorated with the flowers they have bestowed upon us in parting, and wave them good-by.

Before going northward to the Hawaiian (hä-wi'yan) Islands, we steam to Apia, the capital of the rest of the Samoan Group which belongs to the Germans. The German islands are of the same nature as Tutuila; that is, they are volcanic; and for the most part surrounded by coral reefs. They are larger than our islands, but ours are the more valuable on account of the harbor, the Bay of Apia being unsafe in great storms.

The natives are about the same, and they live the same

way. We land at Apia and stroll through the town which lies close to the beach. A little later we take carriages and drive back into the country up the mountain to visit the place where Robert Louis Stevenson, the famous author, spent his last days befriending the people and writing his beautiful stories. His tomb is on the top of the mountain above his home. It is built after the Samoan style. Upon one side of it is a bronze plate, bearing these verses written by him:—

“Under the wide and starry sky,
Dig the grave and let me lie.
Glad did I live and gladly die,
And I laid me down with a will.

“This be the verse you grave for me:
Here he lies where he longed to be;
Home is the sailor, home from sea,
And the hunter home from the hill.”



18. OUR HAWAIIAN POSSESSIONS — HONOLULU

WE are again under the shadow of the American flag, and about to land upon American soil. We left Samoa one week ago, and are now far north of the Equator in the harbor of Honolulu at the crossroads of the northern Pacific Ocean. We saw something of the value of such a location while we were in Tutuila. It is more apparent here in the rich and fertile Hawaiian Islands, which are not only a coaling station, but also a center of commerce and trade. You may have noticed

that country towns spring up wherever several roads come together; that cities rise at the crossing of railroads and the junction of such roads with rivers, and at good harbors where the sea routes and land routes meet. It is the same at the crossroads of the sea, and countries become valuable when they lie at such places. This is especially so with the Hawaiian Islands at the crossroads of the northern Pacific.

For the past week we have been traveling on the direct road from Australia and New Zealand to the United States, and, if we kept straight on, another week would land us in San Francisco. The ship on our right has just come from that port, and the one going out, with a long stream of black smoke following it, is a Canadian Pacific boat on its way from Sydney to Vancouver in British Columbia.

See that transport over there with the American flag at its stern and the hundreds of soldiers hanging over the rail waving their hats and handkerchiefs at us. That vessel left California eight days ago. It came here last night and will start out to-morrow on a straight line for the Philippine Islands, calling perhaps at Guam on the way. The Japanese steamer beside it, with the rising sun on its flag, is from Yokohama bound for San Francisco with a cargo of rice, porcelain, and rugs, and there are other steamers here from Hongkong and Shanghai laden with silk and tea on their way to America. The Hawaiian Islands are also on the direct route from Asia to the Isthmus of Panama, and when the canal is completed, there will be a steady stream of ships flowing through here from Asia to Europe and the eastern coasts of our hemisphere.

The Hawaiian Islands are one of the most valuable possessions in the Pacific Ocean. They are not large islands. Their area all together is not so great as that of New Jersey, although they are scattered from east to west over the ocean for hundreds of miles. The inhabited islands are closer together, but from one end of them to the other is about as far as from Washington to Boston.

The islands of the far west are mere dots on the sea, some of which have never been visited, while others are valuable only for their deposits of fertilizer. Upon some of them guano is found, thousands of sea birds roosting there every night. One of these, named Midway Island, is important as a landing place for the American telegraphic cable, which connects San Francisco with the Hawaiian Islands, Guam, and the Philippines.

The inhabited islands are eight in number, situated at the eastern end of the group just about as far from San Francisco as Chicago is east of that city, and farther from any Australian and Asiatic port than New York is distant from London.

Hawaii (hä-wī'ē) is the largest of the inhabited islands; it is not quite so large as Connecticut, and next in size is Maui (mou'ē), which is not one fifth so large. After that comes Oahu (ō-ä'hōō), in the chief harbor of which we now are, and still farther west is the rich garden island of Kauai (kou-ä'ē), which is twenty-two miles wide and twenty-five miles long. Southwest of Oahu is Molokai (mō-lō-kī'), where the lepers live, and not far from it is Kahoolawe (kā-hō-ō-lä'vā), the smallest of the cultivated islands, so small that we could walk around its coast in less than a day.

All these islands are volcanic; they are made up of high mountains seamed with valleys and gorges, some of which are more than a thousand feet deep. Between the mountains lie rolling plains, and at the feet of some narrow plains slope out to the sea. The best of the cultivated lands are in the plains and valleys, and on the lower slopes of the mountains. The mountains are often barren and ragged, some of them are smoking volcanoes, and others dead craters long since burned out.

It was Gaetano, a Spanish navigator, who discovered the Hawaiian Islands. This was in 1542, but they were not brought prominently before the world until Captain Cook visited them in 1778. When Captain Cook first came, the natives regarded him as almost a god, but a year later a misunderstanding arose. There was a quarrel between the whites and the natives, and Captain Cook was killed on the island of Hawaii, where we may see his monument. Cook named the group the Sandwich Islands after the Earl of Sandwich, one of his patrons. This name has since been changed to the Hawaiian Islands.

At the time of Captain Cook's discovery the country was populated by many brown-skinned people much like those we saw in Tutuila, although they had perhaps a higher degree of civilization. They were then divided into several tribes, each having its own little territory, but, in 1800, Kamehameha (kā-mā'hā-mā'hā), a chief of the island of Hawaii having conquered the other chiefs, proclaimed himself king and founded the dynasty which ruled the group almost to the time (1898) when the islands were annexed by the United States.

In recent years the natives have been steadily decreasing

in number, and there are not one tenth so many now as at the time Captain Cook landed. They were long ago converted to Christianity. They have always welcomed strangers to their shores, so that there are now five or six times as many foreigners, or the descendants of foreigners, on the islands as of natives themselves. The foreigners are mostly people from the United States and Europe and their children, and a large number of Chinese and Japanese who were brought in to work on the sugar plantations. All the people, however, are now American citizens, and we are among friends the moment we land.

What a beautiful city is Honolulu! It is called the Paradise of the Pacific, and it seems a paradise to us as we walk up the wide streets and stroll by gardens filled with tropical plants and hedged with beautiful flowers, under the shade of royal palms and cocoanut trees. We seem to be in a great botanical garden, interspersed here and there with fine houses, lawns as velvety as those of Washington, and beautiful walks and drives.

Honolulu has good business buildings, and the government structures, some of which were once the palaces of native rulers, are surrounded by parks. There are electric cars running through the streets; the town is lighted by electricity, and its stores, with their plate-glass windows, remind us of home. There is a well-equipped gymnasium, a public bicycle track, and schools as good as our own.

The city is beautifully situated on a silvery bay at the foot of a little volcano five hundred feet high, up which we drive for the view. This volcano is known as the Punch Bowl, from the shape of its crater. We stand on

the rim of the crater and see the Pacific Ocean rolling up whitecaps far out from the shore. Right under us is Honolulu, its white houses showing out of the green; and beyond it, reached by a beach drive shaded with algeroba trees and cocoanut palms, is the suburb, Waikiki, where the people go to bathe. Farther back in the country are



"—the government structures are surrounded by parks."

patches of vivid green, the rice and banana plantations, and near them greater expanses of a paler green, marking the sugar estates, for which the islands are noted.

Leaving the Punch Bowl, we go down again to the city and stroll about the streets, now and then stopping at the stores. The people we meet have come here from many parts of the world. There are whites from all the states of our Union and from almost every country of Europe,

yellows from China and Japan, and mahogany browns from the Pacific islands. The men wear Panama hats and white linen suits without vests. Many have bright silk sashes about their waists, and some have silk sashes wound around their hats. Now and then we see a native woman in a loose gown which falls from her neck to her feet, and sometimes native men with garlands of flowers around their necks or their hats.

We spend some time in the Chinese quarter buying tea, candied ginger, and other things of the almond-eyed merchants. We visit the places where most of the Japanese live, laughing at the yellow-skinned babies, some of whom are carried about on the backs of their brothers and sisters, just as they are in Japan. Everywhere we go we see men, women, and children as dark as the Samoans; some of them are native Hawaiians, and others are the descendants of natives who have married white men or women. The native Hawaiians are as intelligent as we are. Many of them are rich, and many belong to the learned professions and do business the same as the whites.



19. THE INDUSTRIES OF THE HAWAIIAN ISLANDS

WE have left Honolulu and are traveling about from island to island, now stopping at a sugar or coffee plantation, now spending the night in a grass hut with our brown island cousins, and now going on horseback or foot through the mountains to look into volcanoes or tramp over craters long since dead.

How delightful it is, and how interesting ! The climate is perfect and the sun is seldom oppressive, for the trade winds temper its heat. Every hour brings a new picture on both sea and land, as we sail along coast after coast. Now we are on the side of an island away from the winds. The country is barren in places and arid bluffs rise up from the sea. Now we have gone around to the opposite shore and all is one dense mass of green, made so by the heavy rainfalls, squeezed from the air as it strikes the cold mountains. In some places the land is low, and upon it are vast sugar plantations of pale green ; in others it rises in precipices hundreds of feet high, over which silvery waterfalls pour. Farther back are the mountains, with the clouds chasing one another over them, or playing hide-and-seek in their sides.

We go miles through woods of ferns and palms, bound together with vines even to the tops of the trees ; there are wild flowering trees, which look like gigantic bouquets. We attempt to gather specimens of the different ferns and orchids, but there are so many we give up in despair. We rest on logs cushioned with moss so thick that we sink into it as on a green velvet sofa ; and as we sit there our Hawaiian guides bring us oranges, bananas, and wild apples plucked from the trees not far away. There is spring water almost everywhere, but we prefer the juice of the cocoanut fresh from the tree, and drink it through a hole in the shell.

And then the sugar plantations ! The green stalks are full of sweet juice, and we suck them like candy. The Hawaiian Islands have some of the best sugar lands upon earth. They yield so much that they could give the

United States and Europe a taffy pulling every year and still keep enough for themselves. They have more than sixty great plantations, which annually produce sugar worth many millions of dollars.

The sugar lands are along the coast and on the lower slopes of the mountains. They are usually owned by companies with large capital, and are divided up into great estates employing thousands of native or Asiatic workmen under white overseers and managers. Most of the hard labor is done by Japanese and Chinese men and women who have little villages on the estates and live there much as at home.

Each estate has its laboratory where scientific men study the soil to see what fertilizers it needs to produce the most sugar. They know how much juice there is in each pound of cane, and how much sugar it will turn out. The larger plantations have railroads upon them to carry the cane to the mills, and where the land is not too hilly the plowing is done with steam plows. On some such plantations they bring the water from the mountains in great wooden troughs many miles long to irrigate the fields, and men ride on horseback through the ditches that the horses' feet may pound the earth down and make it water tight. The ditches have to be watched, for they are liable to leak, and are opened and shut to turn the water where it is needed.

On some estates we see men planting cane. They cut the green stalks into pieces a few inches long, each containing one or more joints, and lay them end to end in the furrows. In a short time new canes sprout from each joint and make their way through the earth. They

grow rapidly to the height of the highest cornstalk or higher, when they are ready for sugar. They are then cut off close to the ground, for the best sugar water is in the lower part of the cane. After this the cane left in the ground will again sprout of itself, and give a second good crop, but the third year it is planted again.



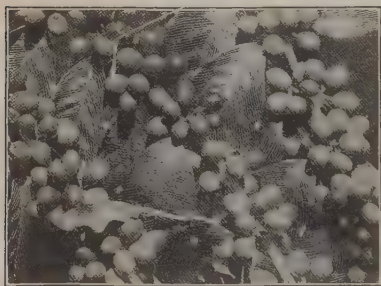
"The canes are cut off close to the ground."

We watch the men loading the cane, and jump upon one of the cars to ride to the mill where the cane is crushed between rollers to get the juice out. The juice is boiled and clarified by machinery, and when it comes forth it is in the sweet, white grains sold in our stores.

Coffee grows best on the lands five hundred or more feet above sea level. The plants are small trees, many of them no bigger around than our thumbs and as straight as a cane. They have shining green leaves and white blossoms, which load the air with perfume.

We visit the nurseries on the hillsides where the plants

are grown from the coffee beans, noticing the care required in raising them. We go with the workmen into the fields and watch the transplanting, now and then helping the Chinese or Japanese laborers dig the holes in the warm, red earth. The little trees grow slowly, and it is not until three years after setting out that they begin to bear fruit. They are in full bearing at five years, when they produce one or two pounds, and sometimes more, to the tree. This amount they will continue to yield for years to



Coffee fruit.

come. The coffee fruit grows close to the stalk. It looks like a red cherry, save that, instead of a stone, it has one or two coffee beans or seeds surrounded by pulp. These seeds are the coffee of commerce.

The berries are picked when they are ripe and the flesh taken off, leaving the bean with two thin white shells or skins on it. These shells are broken off by running the beans through machines so made that they do not injure them.

It is interesting to watch the Chinese at work in the rice fields. Rice is grown in the valleys or low down on the sides of the hills where the patches can be flooded with water again and again.

And then the banana groves, the sweet ripe oranges, so tempting as they hang on the trees, and the great fields of pineapples with their rosy faces tinged with yellow!



Great fields of pineapples.

How delicious they are! The fruit in our stores does not compare with that fresh from the stalk. These pineapples are full of juice, and the dead ripe ones we can almost eat with a spoon. The pineapple grows on the ground much like a cabbage, save that sharp, sword-like, prickly leaves stand out on all sides of each pine, and a bunch of sharp thorns sprouts out of the head of the fruit. Bananas and pineapples are shipped in quantities to the United States.

We enjoy ourselves with our little Hawaiian cousins whom we meet everywhere as we go through the islands. Some of them dwell in grass huts, and others are rich and well educated and live like the whites. All are hospitable, and we often stay over night in a hut, having our dinner cooked after the native Hawaiian style, which we resolve to adopt for picnics at home.

The cooking is done in an oven made by digging a hole in the ground and walling it with stones. Stones are placed in the bottom and a stone arch is built over the top. A fire is then made inside, and when the stones are red



"—little Hawaiian cousins."

hot the oven is ready for use. The arch is now knocked down and the food, having been wrapped in the leaves of banana and other plants, is laid on the red-hot stones. Green grass is spread over the bundles, and above that a layer of earth, a little hole being left in the top.

Water is then poured into the hole and the hole covered up. As

soon as the water reaches the hot stones it forms steam, and this cooks the food. Vegetables, fish, meat, and whole pigs are cooked in this way. Hot stones are put inside the pigs and under their shoulder blades to insure their being done through. The banana leaves with which the various viands are wrapped keep in the juices, and the food is fit for a king.

At nearly every native meal we have poi, and learn to like it. It is one of the chief foods of the natives, and in times past it held the same place among them that bread does with us. Poi is a sort of paste or mush made

of the root of the taro, a plant somewhat like the sweet potato or yam. The root is first ground to a paste and left until slightly fermented. It is usually served from a bowl into which each guest dips his hand and thus carries the poi to his mouth. This takes considerable skill, and it is quite a while before we are able to do it in the most polite way.



Native grass hut.

Our native friends are fond of sport. They like horses, and many of the boys and girls own their ponies. The girls ride astride and are not afraid to dash along the beach and ride far out into the water.

The Hawaiians are fond of the sea. Not only do they ride upon it in boats and swim through it, but they take what might be called sled rides on the breakers as they dash in to the shore. We join in this sport and find it

delightful. Our sleds are boards about eight feet long, a foot wide, and turned up at the end. Each of us takes one of these boards and pushes it before him as he swims out beyond the breakers to the coral reef not far from the shore. We take our stand on the reef, carefully watching the billows as they roll in from the ocean, and at just the right time throw ourselves flat on the board on top of the greatest of them. The mighty wave flies like the wind. We rise and we fall; if we could look back, we should see other waves following behind. In a very few moments, however, we are high on the beach, thrown out upon the soft, white sand. We take our boards, go back, and ride in again, rejoicing in the warm water and in the fact of having had a sled ride in midsummer on the briny Pacific without cold fingers or toes.

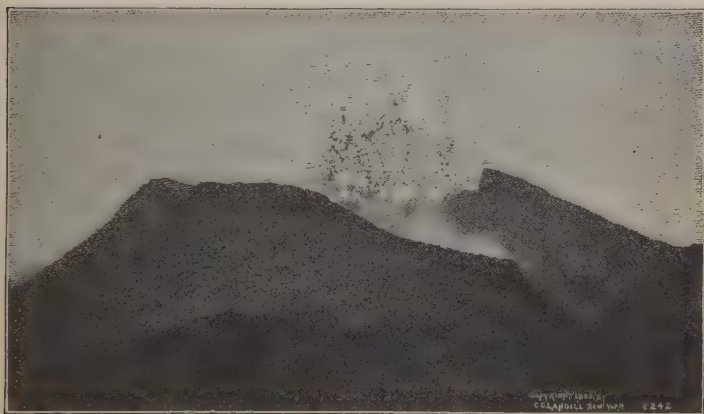


20. A VISIT TO A VOLCANO

WE are in the town of Hilo (hē'lō) this morning, on the island of Hawaii, about to visit Kilauea (kē-lou-ā'ā), one of the largest active volcanoes of the world. How rainy it is! The water comes down in torrents every few hours, and we go about our sight-seeing between the showers. Hilo lies on the eastern side of the island just under Mauna Kea and Mauna Loa, two mighty mountains against which the winds from the ocean blow laden with moisture. As a result, it is about the rainiest town under the American flag and is surrounded by a vegetation the greenest of green. A little river runs through the town, pure mountain water flows along both sides of its streets,

and in the country outside there are creeks at every few miles. There are large sugar plantations close to the town, and cocoanut trees and fern trees, as well as bamboos and bananas scattered through it.

Hilo is, next to Honolulu, the chief city of the Hawaiian Islands. Its harbors will accommodate the largest ocean steamers, and it has considerable commerce. Its wide



Volcano of Mauna Loa.

streets are lighted with electricity; it has numerous telephones, good churches and schools, and large stores and hotels.

We find ourselves among friends the moment we land, and have no trouble in arranging for carriages for our trip through the mountains. We can see the top of Mauna Kea as we stand in the city. It is 13,800 feet above us, and is the highest of all mountains in this part of the Pacific Ocean, although its sister, Mauna Loa, is almost as high.

Mauna Kea is a volcano, but it died ages and ages ago. Mauna Loa is alive. It is a great fire mountain with veins of molten lava from which at times boiling rivers of lava flow down its sides, destroying everything in their path. Some of these rivers have come from the very top of the mountain, and others from the mighty crater of Kilauea, only about four thousand feet above the sea.

The topmost crater has been in action many times. In 1880 it sent forth a deluge of white molten rock which flowed in a wide stream down the mountain from just above where we now are. It swept through the forest and did not stop until within a quarter of a mile of the harbor of Hilo. The lava hardened as it flowed, and we can see it now, cold and dead outside the town, a hideous black mass winding its way like a snake through the green. If we should go round the mountain, we should find other lava floods which have also come from Mauna Loa. There was one in 1852 just over Hilo, another in 1859 on the opposite side, and farther over still are the remains of the enormous flood of lava which it threw out in 1823.

When the crater at the summit is in eruption, it crowns Mauna Loa with a pillar of fire, which can be seen at Honolulu, two hundred miles away. The whole crater then becomes a flaming sea. The lava rises and breaks through the sides in mighty geysers, deluging the country. This crater is almost three miles wide and about ten miles in circumference.

The crater of Kilauea is even greater than that on the summit. It is situated far down the side of Mauna Loa, and is so easy of access that the government has built a good carriage road to it.

We get comfortable vehicles, and dash out of Hilo, with our hats, necks, and even our horses decorated with flowers by our friends upon saying good-by. The first part of our journey is through sugar plantations, the fields of pale green reaching away for miles on each side. We then go through a jungle and on by coffee fields, where we see the ripe red berries through the trees on the sides of the road. There are hedges of ferns, banks of ferns, and ferns springing out from the trunks of trees. Now and then there is a break in the dense vegetation, and we have a fine view of the shore far below us with the blue Pacific Ocean rolling up on the beach.

The slope is quite gradual, but the air grows cooler as we rise, and when we reach the Volcano House on the edge of the crater, we find it almost as bracing as in our mountains at home. It is too late to explore the volcano, for there are cracks in the earth and we dare not walk about at night without a guide. We know we are near it by the strong smell of burning sulphur, by the steam jets here and there bursting through the mountain, and by the clouds of fire hanging over the crater.

We are told, however, that we can not see more until morning, and hence go to bed. Our dreams are full of volcanoes. Now we are flying from molten rivers of lava, and now tottering on the edge of the crater, and now a slip has thrown us down into the fire. We fall with a thud, only to find that the edge of the bed was the rim of the volcano, and that we have rolled out on the floor.

We get up at daybreak to watch the sunrise, and then walk to the mighty black pit we have come so far to see. The steam oozes out of cracks all about us, the earth is

hot to our feet, and here and there we can look down into a crack through which the white-hot lava is flowing.

At last we reach the rim of the crater, and stand there several hundred feet above the lava floor that surrounds the lake of melted lava which the natives have called "The House of Everlasting Burning." We are on the edge of a pit almost eight miles in circumference. It is about three miles from where we are standing to the opposite side, and almost two miles across it in the other direction.

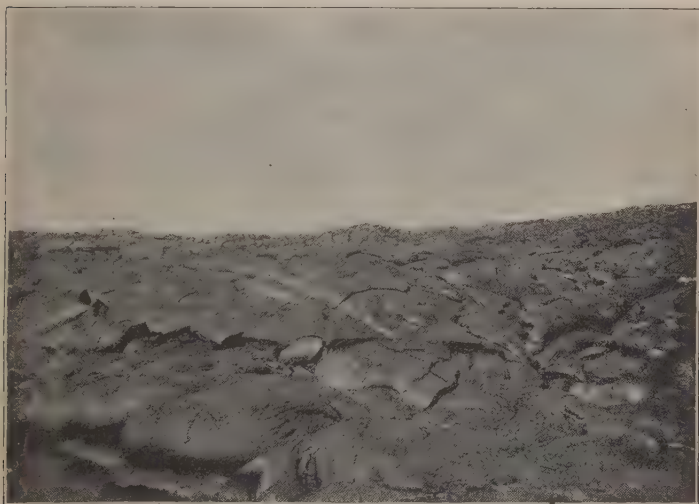
Be careful where you step! The walls of the pit are steep, and if you should fall, you would roll five hundred feet before you struck those masses of lava below. See the sulphur in the earth all about us! Smell the sulphurous smoke which the wind is blowing toward us from the burning lake. It almost takes away our breath, and we put our handkerchiefs to our noses to keep out the fumes.

Picking our way around the rim of the crater we reach a place where the slope is more gentle, and crawl down the sides to the floor of black lava. We tremble a little as we slowly walk over it, for there are cracks here and there through which we can see the fiery mass flowing, and into which we thrust our canes and bring them out burning.

How rough the floor is! It is covered with lava rocks and chunks of lava of all shapes and sizes. It looks like a mass of black ice which has been broken and then tossed about upon a stormy sea and frozen again.

A dense, sulphurous smoke surrounds us. It gets into our lungs and makes them sore. Our throats pain us, and we gasp for pure air. We fan ourselves with our hats as our guide takes us carefully across the burning cracks to

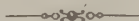
the flaming lake where the fiery molten mass is bubbling and boiling, now and then spitting up molten fire, reminding us of the geysers we saw in New Zealand. The face of the lake often changes. Sometimes a crust of black lava forms, only to be broken by some fresh force below, and perhaps thrown high up into the crater.



"It looks like a mass of black ice."

See, there is some lava going up now! It flies forth like liquid gold and falls outside the burning lake on the crust not far from our feet. We jump back, with our hearts in our throats, and watch the molten mass as it lies there on the crust. See, it is changing! Its fiery gold is turning to copper. It grows darker and darker as it cools, and at last is as black as the crust upon which it lies. The guide tells us it is dangerous where we are standing, and leads us farther away.

A little later he takes his staff and slips down close to the lake and dips it into the lava, some of which sticks to it. He then brings the staff up, and, before it is cold, knocks off the lava and then presses a cent into it. He does this again and again until he has a piece of lava holding a penny for each of our party. The lava cools while we wait, and we shall each take our penny home to show to our friends.



21. THE ISLAND OF GUAM

WE are again on the water steaming westward through the sunny Pacific below the Tropic of Cancer. Our course is a little to the south, for we are bound for the Philippines, and have planned to stop at Guam (gwäm) on the way.



Our ship is a government transport carrying soldiers and army supplies to our colonial possessions, and it is only by special permit from the President of the United States that we are allowed to travel upon it. What a magnificent vessel it is! It is finer than any we have yet seen during our tour of the Pacific Ocean, so broad

that it would fill a roadway fifty feet wide from fence to fence, and so deep that if the keel stood on the ground,

we should be almost even with the tops of the trees as we walk the hurricane deck or climb about in the rigging.

The vessel is divided up into rooms, compartments, and quarters. There are about two thousand men on board, including sailors, soldiers, and officers, and it takes a vast deal of food to supply them. The kitchen is enormous; there is a bakery where a score of men knead away day after day making bread for us all, and cold storage rooms where the meat, vegetables, and fruits put on board at Honolulu or San Francisco are kept fresh throughout the voyage. The ship is heated by steam and lighted by electricity. It has exercise decks and reading rooms, where are also a piano and an organ and other musical instruments.

The soldiers are of all classes, and our life on the ocean is not unlike that of a camp. The American flag floats over us. We are awakened every morning by the sound of the bugle, and the bugle calls us to breakfast, dinner, and supper. It gives the signals for guard-mounting, inspection, and exercise, and early in the evening warns us to put out our lights and get into bed.

Some of the time we live with the officers in the cabins and at other times with the private soldiers, lying on sheets of canvas so stretched between iron pipes that they form comfortable beds. The men sleep one above the other, in tiers of such bunks; and we enjoy ourselves as we lie there chatting with them, and listening to their stories of camp life and battle.

And then there are games upon deck. The men are glad to play quoits and shovel board with us when off duty, and some of them even teach us to drill, allowing us

to form a little squad of our own. The days go too fast, and when, after more than a week, we see a low island of blue rising from the sea, and are told it is Guam, we can hardly believe it.

Nevertheless it is true. We might sail across the Atlantic from New York to Liverpool and not go so far as we have now come from Honolulu on our way to the Philippines, and we have still almost one third of the journey to make. Guam is more than thirty-three hundred miles from the Hawaiian Islands, three thousand miles from Samoa, more than fifteen hundred miles from Manila, and about thirteen hundred miles southeast of Yokohama, Japan. It is somewhat like Tutuila, a supply point for coal and other things on the highroads of the ocean. It is one of the Ladrões, an islet archipelago hundreds of miles long which was discovered by Magellan in 1521, and which belonged to Spain until our war with that country, when Guam was ceded to the United States. At about the same time the rest of the Ladrões were sold by Spain to Germany. Guam is the largest of these islands, but it is only thirty miles long and from three to nine miles in width. It is valuable to us only on account of its position.

Now we are nearer and can see that the island is volcanic, and covered with green. It is made up of low mountains or hills, with stretches of sand and lowlands along the coast, and especially at the north and south ends. Most of it is guarded by coral reefs, and our transport has to move slowly in entering the harbor of San Louis d'Apra (sän lū'ē dā'prä), where we shall land. The island is shaped like the sole of a shoe, and this harbor is on the outside not far from the instep.

The governor comes out to the transport; it is in his launch that we go to the shore, and with him we drive to the town of Agana (à-gän'yà), the largest on the island, situated about seven miles up the coast. The road skirts the beach all the way, and the ride is delightful. We go under beautiful palms, whose cocoanuts make our mouths water as we think of the sweet juice within. We pass



Street in Agana.

many rice fields where brown-skinned men are plowing with the ungainly buffaloes which serve as the farm and draft horses of Guam.

Here and there we see little huts thatched with palm leaves looking out of the trees, and now and then pass brown-skinned men, women, and children clad in white or colored cottons riding or walking along the road. The women have loose gowns with very full sleeves, and the

men and boys wear their shirts outside their trousers. They are the natives, our little brown cousins of Guam; they are much like the Filipinos, and are the descendants of people who have come here from the Philippine Islands.

We have but a short time on the island, our travels being confined to a day in Agana and a trip to the north and south coast. Agana has only seven or eight thousand people. It has a church or so, the government offices, a few wooden buildings, some white adobe houses roofed with red tiles, and many huts made of bamboo poles covered with palm leaves. There are a few stores and a school building or so. Many of the natives speak Spanish, and some know enough English to act as our guides.

In our travels outside Agana we now and then ride up into the mountains to hunt the deer and wild hogs for which Guam is noted. We see many birds, including starlings, crows, snipes, owls, and wild ducks. There are fruit-eating doves with rosy crowns, green backs, and yellow and purple breasts, and also the reed warbler which sings melodiously. We visit the farms on the fertile plains. They are small, for the territory is well divided among the people.

The chief products are rice, cacao, sugar, and corn. There are also groves of bananas and cocoanut trees, and some copra is made for export. All together, however, the industries are few, and the island is of no commercial importance.

The climate is hot, and at this time too wet for comfortable travel. It rains every few hours, the showers have made the roads muddy, and we are glad when we are again back on the transport and on the way to the Philippines.

22. GENERAL VIEW OF THE PHILIPPINE ISLANDS

✓ WE talk much of the Philippines as we steam on toward Manila. Several of the officers on the transport have been stationed on the islands, and we sit with them out under the awnings on deck and look over the government maps, studying our colonial possessions of the western Pacific.

The Philippine Islands were discovered only about twenty-nine years after Columbus came to America. All Europe was then excited by the stories of the New World, and many adventurous men started westward to look up new waterways and new lands. Among others was Ferdinand Magellan, a Portuguese navigator, who commanded a squadron equipped by Charles V of Spain. Magellan had already visited the Malay Archipelago by going eastward, and he hoped to find a westward route to it and Asia. No one then knew how wide the Pacific Ocean was, and we may suppose that Magellan thought that Asia lay only a short distance on the other side of the lands discovered by Columbus.

At any rate, he sailed from Spain in 1519 to the eastern coast of South America and made various explorations, traveling southward along that coast until he came to the Strait of Magellan, through which he crossed into the Pacific Ocean. Magellan was the first to find the strait, and it was named after him. He had bad weather on the Atlantic side of lower South America, but it was so pleasant after he had passed through the strait that he named



the sea the Pacific, or quiet ocean. The Pacific had been discovered by Balboa before this, but Magellan gave it its name.

Sailing to the northward and westward, Magellan went on and on until he discovered the Ladrone Group, to which Guam belongs. A little later, on March 16, 1521, he sighted the Philippines and landed on the island of Cebu (thā vōō'), in about the center of the archipelago. Here he met the king of Cebu, who acknowledged allegiance to Spain and was baptized as a Christian, with hundreds of his followers. A short time after this Magellan tried to subdue the people of Mactan, a little island lying off Cebu, and was killed by an arrow shot by a native.

The king of Cebu thereupon rebelled and the squadron was forced to leave. It sailed southward and westward, touching at Borneo, and then went on to the Moluccas, where it got a cargo of spices. It then sailed for Europe by way of the Cape of Good Hope, and finally reached Spain, having made the first voyage around the world. Magellan named the islands the St. Lazarus Islands because they were discovered on St. Lazarus Day, but the name was afterward changed to the Philippine Islands, in honor of Philip II of Spain, the son of Charles V.

Thus the Spaniards got their title to the Philippines by right of discovery. They conquered most of the natives from time to time and converted them to Christianity. They held the islands until the close of the Spanish-American War, when by the treaty made at Paris they were ceded to us upon the payment of twenty million dollars to Spain.

Our route from Guam is somewhat the same as that of Magellan, and as we near the islands we see that they are, in respect to our homes, almost on the opposite side of the globe. There are two clocks on the transport, one of which keeps Washington time and the other ship time, the latter being changed every day to correspond with our longitude. By comparing the two as the days go on, we find the ship time is now actually more than thirteen hours ahead of that of our national capital, so that when it is high noon at Washington it is after one o'clock the next morning at Manila. We go again and again to look at the clocks, and imagine what our friends are doing at home.

It puzzles us why the time is so different, and how the days are kept the same all over the world. We know that as we go westward the sun rises one hour later for every fifteen degrees of longitude, and that if we kept going on in that direction for the whole three hundred and sixty degrees, or the entire circumference of the earth, we should lose a day, and upon arriving at home should be one day behind our fellows who had remained there since we left. We might think we were landing on Saturday, and start out to work or play before we knew it was Sunday instead. In taking a trip around the world in the opposite direction, we should find ourselves at the close one day ahead.

In order to have the same date all over the world, mariners going westward add a day on crossing a meridian of longitude fixed upon for that purpose, and going eastward one day is dropped. The meridian chosen is the one hundred eightieth. When we crossed this meridian from Honolulu to Guam, the captain put up a notice in the saloon which read:—

“To-day is Saturday, to-morrow will be Monday.” We have thus made our day of the week and month the same as that of our people at home.

It is interesting to know that the Philippine Islands had for more than three centuries a different day of the week from us, because the early navigators were not aware of this necessity of adjusting the date when they crossed the meridian one hundred eighty. They kept the same days of the week which they brought with them from the East, and the day they gave was adopted as the proper day of the week in the Philippines. At the same time the days for Hongkong and the other countries about, which had been fixed by people coming from Europe, were the same as those of the rest of the world, so that Hongkong, which is only a few hundred miles from Manila, had its Sunday while Manila was having Monday. It was not until the 31st of December, 1844, that the matter was rectified by dropping that day from the Manilan calendar.

We are surprised at the size of the Philippines, and the space they take on the map of the globe. If we could lift up the archipelago, including the water within its boundaries, and drop it upon the United States, it would cover about one fourth of the country. From north to south it is longer than the distance from Boston to Chicago, and from east to west its width is greater than the distance from Boston to Pittsburg.

By far the greater part of this area is water, but the islands are more than three thousand in number, and some are so large that all together the Philippines have more land than any state of the Union, except Texas. They have almost twice as much land as all New England,

and about as much as the combined areas of Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, and Delaware. Luzon (lōō-zōn') is as big as Ohio, and Mindanao (mēn-dā-nā'ō) as big as Indiana. Samar (sā'mär) and Palawan (pālā-wān) are each about the size of Connecticut, and Leyte (lā'ē-tā), Mindoro (mēn-dō'rō), and Negros (nā'grōs) are each more than twice as large as Delaware.

The islands are largely volcanic, having mountains covered with valuable timber, and filled with coal, iron, copper, and other minerals, and valleys and plains where the soil is so fertile that it produces large crops of sugar, rice, tobacco, and hemp, and all sorts of tropical fruits. The country is everywhere well watered. It has some navigable rivers and lakes, and many excellent harbors.

The Philippines lie in the North Torrid Zone, but the climate is good the greater part of the year, and so tempered by the winds from the sea and the mountains that our people can live here in comfort. The hottest months are April, May, and June, and the coldest are November, December, January, and February. There is also, in the interior and on the western coasts, a dry season from about the first of November until the end of May, and a rainy season between June and October, inclusive.

These islands are not like New Guinea, the vast country we visited north of Australia, a wild land sparsely inhabited by savages. There are wild men, it is true, but the greater part of the inhabitants are Christians, and many of them more or less civilized.

The population is large. When Uncle Sam adopted the Filipinos, he made a mighty addition to our national family. Our little brown cousins out here are about one

twelfth of our whole population. That is, if Uncle Sam could put all of his people into one field and mix them thoroughly, one in each dozen would be a brown-skinned Filipino.

There are about seven million people in the islands, including several different races and many tribes, each of which has its own peculiar habits and customs. There are, in the first place, the Negritos (*nā-grē'tōs*), who are supposed to be the first inhabitants, and to have come from New Guinea. They are little black men with frizzly hair, who live in the highest mountains and other inaccessible places. They are few in number, and are widely scattered.

Next are the Indonesians, composing about sixteen tribes, found chiefly in the island of Mindanao. They are generally savage, or at the best semicivilized. They have tall and strong frames, light yellow skins, aquiline noses, and wavy black hair.



"There are wild men.
it is true."

Last, and more important than the two other classes, are the Malaysans, who form almost the whole population. They are the descendants of Malays who have come here from time to time from Malaysia and intermarried with the Negritos and Indonesians, and also with the Chinese, Japanese, and Europeans who have found their way to the islands. Of this mixed class there are more than six millions; some of them are pagans, some are Mohammedan Moros, and the remainder, comprising the

most of the Malayans, are Christians. In addition to the natives there are also some Spaniards and other Europeans, and now that we have the islands, many Americans.

But we shall see the people themselves as we travel over the country. The natives are different in different parts of the archipelago, and, broadly speaking, the islands



"Visayans, people much like the Tagalos."

may be divided into three zones, according to the predominant races which inhabit them. The northern zone, where we shall first land, embraces Luzon and its neighboring islands. There are the people with whom we had the most trouble when we took possession of the country. They are Tagalos (tá-gäl'ōs) and other similar tribes, many of them well educated and all having more or less civilization.

South of Luzon and north of Mindanao is what might be called the middle zone. It consists of the Visayan

(vê-să'yăn) Islands, inhabited by Visayan people much like the Tagalos, although they are more peaceful and not so courageous. They are also civilized, having many villages and towns, plantations and farms.

South of this Visayan Island Zone lies the third and last zone, the zone of the Moros or our Mohammedan cousins. It includes the great island of Mindanao, the pear-shaped island of Basilan, the island of Palawan, and the hundreds of islands of the Sulu Group which may be seen dotting the water like a series of stepping stones from Mindanao to Borneo.

These zones we must remember are not inhabited entirely by the above-mentioned races. Each island has its savage tribes which live in the mountains, and the chief races have different tribes or families, each having its own language. There are so many odd natives that we feel rather queer when we remember that they are all now under control of the United States, and as such our cousins under our great Uncle Sam.



23. MANILA, THE CAPITAL OF THE PHILIPPINES

THE day is just breaking, but we are already on deck at the prow of the ship looking at the coast of Luzon. On both sides of us are low, green hills with smoky blue mountains behind them, and right in front is a little green island with the sun rising over it. That island is Corregidor (côr-râ-hê-thôr'), from which the Spaniards fired

at Admiral Dewey as he sailed into the Bay of Manila to fight his great battle. It divides the entrance to the bay into two channels, and the Stars and Stripes floating over it shows that it is now held by American soldiers. We follow the same course that Dewey took and are soon in the bay.

What an enormous body of water it is! In its center we are almost out of sight of land, and the blue hills become a faint haze in the distance. It takes us several hours to cross over to Manila on the opposite side. We pass ships of all kinds on the way, and anchor at last near the mouth of the Pasig River in one of the busiest harbors on this side the world. There are ships from China, Japan, Australia, and India all about us; there are vessels from Europe, taking on and putting off cargo, and transports and other ships from the United States; there are steamers coming in from and going out to different parts of the Philippines, and sailing vessels from the many islands about. Saucy little tugboats are hauling huge barges, called "cascoes," steam launches are flying over the waves, and ferryboats for Cavite (kà-vē'tā) and other places are moving by us loaded with passengers. There are scores of rowboats worked by brown-skinned oarsmen and fishing boats bringing their catch to the markets.

We ride to the shore in one of the government launches, making our way in and out through the shipping of the wide Pasig River, and are landed in the heart of the city. Here we take carromatas, the two-wheeled pony cabs of the Philippines, for the hotel. Our drivers are little brown men in white clothes, who whip up their ponies and race

through the streets, dashing in and out of the mass of carts, wagons, and cabs so recklessly that our hearts are in our throats all the way, and we scarcely see the strange sights about us. We arrive safely, however, and later on become used to such driving, and like it, especially as the weather is too hot for walking.

After a dinner at the hotel we visit the church of Saint Sebastian, on the edge of Manila, for a bird's-eye view of the city. A black-gowned priest opens the door, and with him we walk up and up the hundreds of steps of the slim, spiral staircase to the top of the tower, where we have all Manila below us.

The city lies on a plain backed by blue mountains which reach on and on about the silvery waters of the great bay. The buildings are low one and two story houses with the domes and towers of churches rising above them; there are green trees here and there showing out above the house roofs. The city skirts the bay for miles, extending far back and losing itself in a green plain spotted with trees. There are in all about twenty square miles of buildings, and as we look we can see something of the importance of our Philippine capital. Manila has about as many people as Indianapolis; it is the chief center of commerce and trade for all of the islands, and it is one of the principal cities of this thickly populated part of the globe.

Take your field glass and look at it more closely. See how the plain is cut up by the wide streets crossing one another at all sorts of angles. The waterways are as many as in the cities of Holland. That stream just below is the Pasig River, which flows from the Laguna de Bay, a great lake not far away, to the Bay of Manila. It

is navigable for small steamers, and there are canals running out from it in every direction, enabling boats to reach any part of the city.

Now notice the mass of houses on the left of the river with the big wall about them. That is Old Manila connected with the business part of the city by the Bridge of Spain, which you can see crossing the Pasig. It is there



The Escolta, Manila.

that most of the officials have their offices, and there also are many churches and monasteries, colleges and schools. That monument on the bank of the river was erected by the Spaniards to Ferdinand Magellan.

The part of the city outside the wall and on the other side of the river is where most of the people live, and where nearly all the business is done. The Escolta (*escol'tä*), the chief business street, is just over the bridge, and the markets are across another bridge still farther away.

Beyond the walled city skirting the bay are Malate (mä-lä'tā) and other suburbs, fine residence sections, and between them and the walled city facing the sea is the Luneta, the park where fashionable Manila comes to drive and listen to the music from five o'clock until dusk every afternoon. We can see the moving crowd through the field glass, and the music, though faint, floats up to our ears.

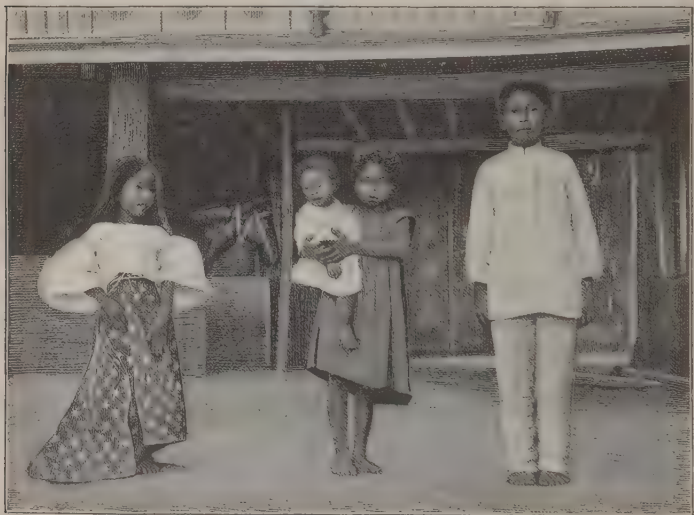
Let us turn our backs to the city and look at the fields. They are as green as our country in June. The plain is dotted here and there with clumps of bamboo and tall palms. There are vegetable gardens, patches of rice, and groves of bananas, with roads and streams running through them. .

The sun hangs low as we look, and its rays catch the crowd of men and women coming back to Manila from their work outside the city, making bright-colored ribbons through the green fields. Most of the men are dressed in white cotton, and the women wear black shawls and red skirts, which the sun's rays turn to streaks of red and black as they move over the green.

Suppose we go down and take a walk through the streets. They are thronged with people, and we have a good chance to see some of the strange characters of this very strange city. We are moving along with hundreds of little men, women, and children, our brown-skinned cousins of the Philippine Islands. There are Filipinos of all classes, ages, and sizes. Some of the boys go along hand in hand, and the girls are walking with their arms around the waists of their friends.

Hear the people talking as they move onward. Their

language is musical and somewhat like Spanish, but we can not understand it. Now and then a girl laughs, and her white teeth show out against her brown skin. The Filipinos are by no means bad looking. They are straight and well formed, although not so tall as we are. They have black eyes, almost slanting, and coarse black hair. Their lips are not thick, and their noses are as straight as our



Filipino children.

own. They look clean, and we learn that most of them take a bath every day. See those two women with their hair down their backs. They have come from a dip in one of the canals, and can not do up their hair until it is dry. Other women wear their hair in great knots on the tops of their heads. Many of them are bareheaded, and most of the boys have no hats.

What a curious dress! The women and girls wear



Filipino family.

a flowing skirt around which is wound a broad strip of cloth tucked in at the waist and forming a sort of overskirt. Above this is a waist of gauze made low at the neck, with bell-like sleeves cut off at the elbow. The stuff is so thin that the skin shows through, and it must be delightfully cool; it is made of the fiber of the pineapple and other plants. Around the neck is a broad starched collar. Many of the women wear heelless slippers and the girls are barefooted.

Take a look at the men. What would you think if half the men and boys of your town should come out with their shirts outside their trousers? That is what they do here. It seems strange at first; but it is cooler to wear one's shirt in that way, and we must remember that we are not very far north of the Equator. Some shirts are so thin that we can see the brown skin showing through as they

flap about in the breeze. The men of the better classes wear coats, and some have on suits of white muslin. Many Americans here are dressed in white linen or yellow khaki, and they tell us we had best buy such suits for ourselves. We meet better clad natives as we go into the Escolta, and find that the Filipinos of the higher classes dress much as we do.

How crowded it is! The sidewalks are about three feet wide, with hardly room enough for three persons abreast. We are often shoved into the roadway and have to look out for the carts, carromatas, and carriages which are hurrying in both directions. Every coachman is flogging his pony, and we wonder if the Filipinos know how to drive slowly.

The only slow things on the road are the carabaos, or water buffaloes, dragging great drays loaded with hemp, tobacco, and all sorts of goods. There come two now, one following the other, each pulling a dray. Jump into this doorway and wait until they pass.

Did you ever see animals so ugly? They are of the cow family, but I am sure no respectable American cow would acknowledge the relationship. Their skins look more like that of a pig, and the thin, bristling black hair so stands out upon them that you can see the dark skin shining through. Most of the carabaos are black, although we now and then see some blond ones with white hair and a rosy red hide.

They are all very dirty, for they are like pigs, in that they wallow in the mud. They delight in the water, and must have their baths several times a day, or they will grow crazy. For this reason the drivers of the carts

stop now and then as they cross a river or canal, and allow their beasts to take a ten-minute bath. The huge animals walk down the steps and lie down, with nothing but their heads showing out. We may see scores of them so bathing during any half-hour's walk along the waterways of Manila.



Carabaos, or water buffaloes.

The carabaos are very valuable to the Philippines. They are strong, and can plow and harrow the muddy rice fields, where a horse or mule would sink through. They haul the drays in the towns, and do all kinds of draft work and farm work. Provided they get their baths, they are gentle. The children are fond of them, and boys and girls ride them as they feed in the pasture, and that without bridle or saddle. Carabaos give milk like cows, and their meat takes the place of beef among the poorer classes.

Here we are in the Escolta, the chief business street

of Manila. The stores are smaller than at home, and each has one or two families living above it. Most of the stores have awnings out over the sidewalks; some have Spanish signs, and not a few are still owned by Spaniards.



"Some go about with packs on their shoulders."

Turning a corner we enter a quarter where nearly all the stores are Chinese. They look like little caves cut out of the walls, and are so full of calicoes and other merchandise that there is no room for cases or counters. The goods are piled up on the shelves, or hung from the ceilings, and even piled outside on the streets. The upper floors of the buildings extend over, shading the sidewalk, and in the windows above we see yellow-skinned, almond-eyed women and children looking out.

The Chinese are great traders, and many have come here to do business. There are fifty thousand in Manila, and more than one hundred thousand in the

Philippine Islands. They sell merchandise in all parts of the archipelago. Some go about with packs of goods on their shoulders, peddling their wares from house to house; others are mechanics, and others work in the streets and on the plantations.

24. HOME LIFE AND THE MARKETS

WE have many friends in Manila, and through them are able to visit all classes of the people. Our first call is on the family of a Filipino official, who lives just out of the city. His house is a great two-storied building, with a beautiful garden about it shaded with palms and other tropical trees. A wide drive leads to the entrance, and we go upstairs to reach the living rooms of the family. The better class Filipinos live on the second floor, because it is more healthful well up from the ground. The servants have their quarters below, and the carriages and horses are often kept there.

Our friend's house has many large rooms with high ceilings and wide, airy halls. There is a balcony around the whole house at the second floor, into which the rooms open, and this balcony is walled with windows of lattice work, composed of the shells of pearl oysters so thin that they let in the light while they keep out the heat. The pearl windows are moved back in the evening, and the air blows through the house, making it delightfully cool.

The house is well furnished. It has its piano and organ, for the Filipinos are fond of music. There are large tables, many chairs of bent wood, and sofas of woven rattan. We are shown the sleeping rooms. The beds are twice as large as ours, and each has above it a mosquito netting which is let down at night. There are no springs. The bedsteads are covered with cane like a chair seat, and a thin comfort or mat takes the place of the thick mattress we have at home. In a warm climate like this the chief

thing is to keep cool, and we have already learned to like beds of this kind, although at first we rolled over and over trying to find a soft spot on the mats. The pillows are of hair, stuffed hard, and each bed has a long, hard bolster for one to throw his leg over while sleeping. We take dinner with the family; everything is well cooked, and the meal is not unlike that of our homes.

Our next visit is to a small merchant in a crowded part of the city. His house is on the level of the street. The entrance is through a garden about ten feet wide and twenty feet long, covered with a thatched roof through which banana trees have grown. These have extended their broad leaves over it, and keep the garden quite cool. There are seats on each side of the walk, and here we find several of the family sitting.

Our hosts rise and shake hands with us, and the mother leads us into the house. We first enter a narrow hallway with a little bedroom on each side and a dining room and kitchen at the end. The latter rooms and the garden are where the family live during the day. Each room is about twelve feet square, neatly kept, but well blackened with smoke. Very few of the Filipino houses have chimneys, and in many the cooking is done with charcoal, which makes but little smoke. In other places, such as this, sticks and bits of wood are used, and the smoke gets out as it can.

The dining room serves also as the parlor. It has a floor of red brick, and its furniture consists of two chairs and a cane-seated lounge, the latter being hung to the ceiling to be kept out of the way until needed. It is let down during our visit, and the wife of the merchant bids

us sit down. She is a comfortable-looking, brown-skinned little lady with white teeth and a pleasant smile. She shows us the sleeping rooms on each side the hall. Each room is just wide enough for the bed of split bamboo poles fastened to a framework of larger bamboos, which stands within. The people prefer to sleep on such poles rather than on hair, feathers, or straw.

We go with our hostess to the kitchen. The cooking arrangement is merely a ledge of bricks and mortar running along one side of the room. In the top are four holes, each about as big as a tin wash basin, with a hole cut through the ledge under it to furnish a draft.

In each hole burn about a dozen sticks laid one on top of another. Upon the fire rest bowls of black clay, in which the family dinner is cooking. Our Filipino friend lifts up the lids of the bowls and shows us their contents, and asks us to stay and take dinner. The first bowl contains rice, the second has a fish stew, the third is full of boiled beans, while in the fourth is a hash of vegetables and pork cut into small bits. The smell is delicious, but our time is so short that we can not accept her kind invitation. So we say good-by, and walk on to the markets which are not far away.

Much of the business of the Philippine Islands is done in the markets. Every city and village has its market place, often in the park or square in the center, where the people meet daily to buy and sell. Here are many huts or booths of bamboo framework thatched with palm leaves, in which men and women merchants squat, with their goods piled about them or hung up on poles overhead. The floors serve for both chair and counter, for

there the customers sit, and there the merchants spread out their wares.

Not only fowls and eggs, fish and meats, vegetables and fruit, and all kinds of food, but clay stoves, wooden ware, household utensils, as well as clothes, shoes, and dry goods, are sold in the markets. At some towns there are fairs at given times of the month or year, when people



"Every city and village has its market place."

from miles around come together to buy and sell. The markets of Manila are large, and their buildings are better than those of the country towns, but the scenes in them are much the same.

We make our way through the drays and carts surrounding the market, and enter the dense crowd of women and men within. How noisy it is! Some are buying and selling, some laughing and chatting, and some hurrying to and fro with great burdens on their backs or heads.

All trading is by bargaining, and the people are yelling and screeching out their offers to buy and refusals to sell. Each protests that the other will ruin him until the purchase is made, when usually he smiles, and the two laugh and chat together as though they had not been almost quarreling before.

How many women there are! They do most of the selling, and most of the buying as well. The porters are women. Those girls with hats as big as umbrellas have come in from the country with something to sell.

The Manila market is divided up into streets, each having its own kind of business. Here is a section selling nothing but clothes. It is like a bazaar with many cells, each owned by a brown-skinned woman merchant. The dealers are bareheaded, and we can see their little bare feet sticking out of their skirts as they sit on the floor and show us their goods. Each woman has a money box beside her, and all are keen at a bargain.

Passing on we go into another street where they are selling nothing but shoes. And such shoes! The most of them have wooden soles with only a strip of leather over the toes or the instep. Some are rain shoes with toes and heels extending several inches below the soles, so that the wearer is kept well above the water and mud. None of the shoes confine the heel, and as the people seldom wear stockings, their bare feet may be seen bobbing up and down as they walk.

Farther on we find stoves and cooking utensils. The shopkeepers are selling pots, pans, and kettles made of red clay. The stove most common is a clay bowl with little knobs inside it to hold the pots above the charcoal fire

built in the bottom. A separate stove is used for each dish, and in rich men's houses a dozen fires may be going at once.

We spend some time among the rice sellers who are measuring out rice from the enormous baskets in which it is kept. Rice is the bread of the Philippines, and every family buys some every day.

Not far away is the fish market, where are all kinds of fish, fresh and dried, from minnows, not so big as a baby's little finger, to fish so large that they are cut in slices for steaks. Many fish are sold alive, being kept in baskets of bamboo so tightly woven that they will hold water. Every customer feels the fish before buying, to make sure that it is fresh, and then the peddler kills it by pounding it on the back with a stick.

It is interesting to see the chickens and pigeons in baskets and cages of loosely woven bamboo. Hogs are kept until wanted, and there are pens of the dearest little guinea pigs, which are sold to be eaten as we eat rabbits or squirrels.

Among the most delicious things sold are the fruits. There are bananas, large and small, with skins red, yellow, and white; there are lemons, oranges, pineapples, and great balls of breadfruit. We each try a slice of the papaw, a fruit as big as a musk melon, and not unlike it, although it grows on a tree. It tastes sweet, but is rather insipid, so we buy something else. We are delighted with the mango, a rich yellow fruit as large round as your fist, and often six inches in length. This is the queen of the fruits of the Philippines. It has a long, narrow seed surrounded by flesh which is deliciously sweet, with a slight

turpentine flavor. It grows on a tree, found almost everywhere in Luzon, and also in other parts of the Philippines. A few cents pays for all the fruit we can eat, and we walk on, peeling bananas and munching them as we go.

Among the vegetables are lettuce, cabbage, sweet potatoes, onions, the green shoots of the bamboo, as well as many things strange to our eyes. One of the woman peddlers picks up a handful of the white roots she is selling, and asks us to buy. We each take a root and bite into it, but spit it out quickly. It is as hot as fire, our tongues and lips smart as though they were poisoned, and we take quick bites of banana to cool them. This root is ginger. It grows wild in the woods, and is used by the natives to make a weak tea and a fish sauce.

What are the queer nuts in that tray on the other side of the ginger? They look like green butternuts. There is a little pile of lime near them, with palm leaves and tobacco beside it. See that old woman who has come up. She picks up a nut and bites into it. As she opens her mouth, we notice her gums are apparently bleeding. Her tongue is red, and her teeth seem to drip blood. She has a quid inside her left cheek which she chews now and then during her talk with the root seller. She is chewing the betel, a nut like those on the tray. The betel nut is the fruit of the areca palm. It is cut up and mixed with lime and tobacco, and thus chewed, making the saliva the color of blood. The habit is common not only throughout the Philippine Islands, but also in Siam, Burmah, and other parts of the world. It has much the same effect as tobacco upon those who use it.

25. A TRIP THROUGH THE COUNTRY — RICE, SUGAR, AND TOBACCO

WE leave Manila this morning to see something of the Filipinos on their farms, and in their towns and villages. Our journey will last several weeks, for Luzon is, with the exception of the wild land of Mindanao, by far the largest of the Philippines. It has more than half of their entire population, and is the best developed and the wealthiest of all. It has many resources, and we shall see some of the chief industries of the archipelago during the journey.

Our first trip is through the rich valley which runs from Manila northward to the Gulf of Lingayen (lĕn-gă-yān'). This valley is more than one hundred miles long, and in places fifty miles wide. The oldest railroad of the Philippines runs through it, and we go on the cars. How delightful it is! We have shot out of the city and are speeding along over a plain bordered on each side by magnificent mountains as blue as the Alleghanies in mid-summer. The car windows are open, and the fresh air blows through. On each side of the track are vast fields of rice, dotted here and there with groves of bananas, patches of Indian corn, or the pale green of little sugar plantations. Now we pass a clump of tall, feathery bamboos, and now a road or stream lined with these beautiful trees.

We can see but few houses from the car windows, although some of the towns are made up of a single street several miles long. The houses are hid by the bamboos



“—vast fields of rice.”

and other trees which shade them. There are no buildings in the fields. Most of the people live in villages scattered along the roads, as in many countries of Europe. Some of them walk several miles to their work every day.

There is but little stock. We see neither cows nor sheep. The ponies of Luzon are raised in other sections, and the only animals visible are the carabaos, and now and then an ugly black pig. The carabaos are everywhere. They drag farm carts with solid wooden wheels a yard in diameter, and haul sleds where the ground is so soft that carts can not be used. We see them in the mud of the rice fields, going along, with their heads down, drawing rude one-handled plows. In many places they are ridden by men or children; and still stranger they are often ridden by birds. Every other buffalo we see in the fields has a

bird on his back. There is one now quietly feeding with a great white crane roosting on him. Farther on is another, upon which stands a crow. Each bird is picking at its buffalo, but the buffalo understands it. He knows that the birds are good flycatchers, and that they live on the insects that feed upon him.



"We see them in the mud of the rice fields."

Look again at the fields. Those devoted to rice are surrounded by low, mud walls upon which green grass and wild flowers are growing. The walls are to keep in the water with which the rice is flooded, and they also form paths through the fields. You can see people walking upon them, and carabaos ridden by children going to or coming from pasture.

In some places the rice is still green, but more often it is of a rich golden color with well-headed stalks. That

rice is ready for harvest. The seeds from which it came were planted in beds months ago, and the little sprouts were set out one at a time in the mud, so that the field, when finished, looked like one of our wheat fields in the spring. Then the rainy season came on and gave the land a good soaking. It covered the sprouts with water, and they grew. The fields now look much like our oats or wheat when ready for harvest; they are fit for cutting; after that the rice must be thrashed and hulled. Rice is the chief food crop of the Philippines, and we shall see the people working in it almost everywhere during our travels.

There is a field where they are harvesting now. See those big-hatted women whose red skirts show out above the yellow grain! Each has a little knife in her hand; she is cutting the rice stalk by stalk, and binding it up in fat sheaves not bigger than a good-sized bouquet. Farther on is a field in which the sheaves are shocked up, and next to it one where men are thrashing. A blind-folded carabao is walking over the straw to tread the rice out. Sometimes men and women jump up and down upon the rice to thrash it, and sometimes the grains are pulled from the stalk through sawlike machines. After this the hulls must be pounded off with hard wooden pestles in a mortar made of a block of tough wood. Nearly every farmer has such a mortar, and one of the daily chores of the boys and girls of the family is to pound the rice out. After being hulled, the grain is winnowed by throwing it up in the air so that the chaff blows away.

Farther up the valley we come into a region where the soil is better fitted for sugar. The country seems flooded with a sea of pale green which rises and falls in waves

under the wind. We are now in the sugar lands, and for miles see nothing but cane. Here and there men are plowing with water buffaloes. How rich the soil is! The newly turned ground forms islands of black in the ocean of green. We see barefooted girls planting the crop, laying the bits of cane end to end in the furrows just as they did in Hawaii. How rude everything is! In the Hawaiian Islands there were steam plows, and all sorts of labor-saving machinery. Here the work is all done by hand. The girls are even using their bare feet to cover the cane, and fresh planting supplies are brought to the droppers on carabao sleds.

In other fields they are cutting the ripe cane, and carting or sledding it to rude mills where the juice is squeezed out and reduced to coarse sugar. This is one of the chief products of the Philippines, and we shall see many thriving sugar plantations in the Visayan Islands farther south.

We cross several rivers during our journey. The Philippines are well watered. There are brooks and creeks every few miles. The banks are lined with trees, and we frequently see boys fishing in the shade. The larger streams have boats and cascoes floating upon them, and we often pass a raft of timber or bamboo poles floating down to the market.

Leaving the train we spend a night in one of the towns. They are much the same everywhere. Each has a plaza or open space in the center upon which face the church, the town offices, a store or so, and some of the best houses. The streets run out from the plaza; they are often mere roads lined with houses or huts.

Many of the houses in the villages are thatched with

palm leaves; their huts have walls of woven bamboo splints tied to a framework of bamboo poles. The roofs are of nipa palm leaves sewed together, and tied to the roof poles with strings of rattan. The leaves overlap one another like shingles, forming a water-tight covering. The roofs are often built on the ground, and carried through the streets to be placed on the walls.



"The houses are built upon posts."

The houses are built upon posts so that the floors are six or eight feet above the ground, and so high up that the carabaos, chickens, and hogs can be kept under them. The people must go up steps and ladders to get into their houses.

Some of the better class country houses have two stories, like the houses we saw in Manila. They have a framework of timber, board walls, and large sliding win-

dows of lattice work or glass. They are seldom plastered or papered. The living rooms are on the second floor, as the people do not like to sleep near the ground.

We leave the cars at Dagupan (dà-gōō'pàn), near the Gulf of Lingayen, and there take a coasting steamer for Aparri, a thriving port of northeastern Luzon at the mouth of the Cagayan (kă-gà-yăn') River. This river is one of the largest in the archipelago, and it forms the outlet of a great valley containing some of the best tobacco lands of the world. It has annual floods which carry down the rich earth from the mountains and spread it over the fields, fertilizing them as Egypt is fertilized by the Nile.

Our ship has come from Manila to Aparri for a cargo of tobacco. We see vessels loading tobacco as we drop anchor, and learn that hundreds of thousands of bales are annually shipped from Aparri. The captain introduces us to some of the planters, and we go with them on a little river steamer up the Cagayan Valley.

This valley is, if anything, more beautiful than the region we have just left. The mountains are covered with trees, and on their lower slopes are thousands of patches of the rich dark green leaves of the tobacco plant. Here and there we see a great shed, thatched with palm leaves, used for curing the tobacco, and now and then pass a village in which the planters and workmen live.

Tobacco plants are grown in seed beds or nurseries. The seed is sown, and the plants, when they have well sprouted, are set out so close together that there are sometimes ten thousand plants on one acre. This is done in October or November, and by March or April the leaves are ready for harvest. In the meantime the crop is carefully culti-

vated. It is weeded usually by women and girls who also go carefully over each plant every morning to pick off the worms. The leaves are cut off and then cured and sorted. They are packed in bundles of one hundred, and these bundles into bales so tightly pressed that each contains four thousand leaves. The bales are sent down to Aparri and thence shipped to the factories of Manila.

The Philippine Islands are famous for their tobacco. The tobacco plant grows well in almost every part of the archipelago, and vast quantities of it are raised and exported. Much of it is sent away in the cigars and cigarettes made at Manila. Some of the factories of that city employ thousands of hands, many of whom are women and girls noted for their skill in rolling cigars. In such factories one may see hundreds of girls sitting on the floor or on stools half a foot high, with low tables before them containing piles of the dark brown leaves. They work rapidly and some make hundreds of cigars in a day. Men and boys are also employed.

A large amount of the tobacco is consumed in the Philippines, for not only men but also women, and sometimes even boys and girls, smoke cigars and cigarettes. In the house and out they may be seen puffing away, and we are often politely invited to join in a smoke.

At Aparri we are near the northern end of the Philippine archipelago. There are some little islands belonging to the United States north of Luzon, but our time is so limited that we shall not be able to visit them or to explore Formosa, which is still farther north. There are people at Aparri, however, who know the latter island quite well, and from them we learn much about it.

Formosa belongs to Japan, having been ceded to that country by China at the close of the Chinese-Japanese War in 1895. It is a volcanic island and is in most respects like the Philippines. It is about one third the size of Luzon and has more than two million people. It is so close to China that many of its inhabitants are Chinese, although there are savages in the mountains quite as wild as any of our Philippine tribes.

Formosa is a very rich island. It has tea gardens and sugar plantations which are chiefly owned by Chinese and foreigners. Its mountains contain coal, iron, and gold, and they are covered with forests of valuable hard woods. The island has curious trees, including some yielding soap, tallow, and camphor. The soap-tree fruit has seeds which can be used in the place of soap for washing; the tallow trees, which are somewhat like our poplars, bear a white berry about as big as a pea, from which tallow is made; and the camphor tree produces the camphor of commerce. Camphor trees grow to a great size in Formosa, a single tree sometimes being twenty-five feet in circumference. The camphor comes from the sap obtained by cutting the tree into chips and boiling them. The mixture of water and chips is distilled and the result is pure camphor, which is run off into molds and cooled. It is exported to all parts of the world.

Beginning at Formosa the empire of Japan extends in a long chain of islands, large and small, almost to Kamchatka in Siberia, a distance of thousands of miles. The archipelago includes the Riu Kiu Islands, the four great islands which comprise the chief part of the empire, and the unimportant Kuriles (*kōō'rils*) still farther north. We

have fully described Japan during our travels in Asia, and we shall not further explore it, and for the same reason we shall not go to Hongkong off the east coast of China.

We have hardly begun our explorations of the Philippine Islands, and, like good Americans, we want to give as much time as we can to our own possessions in this far-away part of the world.



26. THROUGH THE MOUNTAINS OF LUZON

LEAVING Aparri, we mount horses and make our way back over the mountains to Manila, now going for miles through tall pines, and now cutting our way through forests of hard woods so bound together by vines that we can go but few miles a day. The hills are so steep in places that our horses almost fall backward, and when they descend, they keep their forefeet together and slide. The foothills and valleys are often covered with a wiry grass so high that we drop the reins and hold up our hands to prevent the grass cutting our faces as we ride through.

A part of the trail is through the beds of mountain streams walled and roofed with bamboos and vines, making a green arbor miles in length, but so low in places that we have to hug the necks of the ponies to keep our heads on our shoulders, and so thick at both sides and on top that the hot sun can not get through. There are immense trees on both sides of us, and looking up we can often follow their trunks with our eyes for one hundred feet or more to where the first limbs begin.

Now we go through a grove of fern trees with branches

fifteen feet long and leaves of feathery lace; and now into hills covered with cedars and pines. There are orchids everywhere and strange flowering plants. We try to make notes of the trees, but soon give up in despair. More than half of our Philippine territory is covered with timber, and the forests form much of its wealth. Six hundred and sixty-four varieties of native trees are already known; and among these are fifty species from which rubber, gutta percha, and other gums are extracted. There are also banyan trees with great roots extending down from their branches. There are forests of the most beautiful hard woods, including ebony and the Filipino mahogany. Along the coasts are cocoanut and other palm trees and bamboos everywhere on the plains, along the streams and in the mountains as well.

The bamboo grows in clumps of from a half dozen to two score or more stalks, which shoot up at a slight angle to a height of forty or fifty feet. The stalks are green with knots like a fishing pole, and little branches with leaves not unlike grass leaves at each knot. The stalks are of all sizes, some as small as a baby's finger and others as big as the leg of a man.

The Filipino uses the bamboo for almost everything. The cane forms his milk can and water bucket. He splits it to pieces and weaves it into baskets and hats. He fastens it to a block of wood and makes a candlestick, or with a shorter section an inkwell or a spittoon. The farmer uses rakes and harrows of bamboo, which he hauls to the field on a bamboo sled hitched to a carabao by a bamboo yoke, which he drives perhaps with bamboo reins. The fisherman has nets of bamboo and fishing

traps of the same. Water is carried over the fields in bamboo pipes, and many bridges are made of bamboo poles. Some of the houses have a bamboo framework with walls of woven bamboo splints looking like basket work and floors of bamboo poles. The native climbs into such a house up a ladder of bamboo, sits on the bamboo floor upon a bamboo stool, before a table which may have bamboo legs, and eats the shoots of the young bamboo, which are as delicious as any of our green vegetables at home.

As we travel onward, now crossing a range of mountains and now a cultivated valley, we come upon many different people and tribes. We are in a new country at every few miles; the people have a different language, so that the natives of one province often can not make themselves understood in other provinces near by.

We shall have to get new interpreters every few days if we would study the people, although we can make our way through the settled portions of the country with Spanish, for this language has long been taught in the schools. Nevertheless, only one Filipino in ten speaks Spanish, and outside the civilized regions but few natives understand it.



Filipino milkman.

In our short tour we can not see much of the wild men of the Philippines. The most of the islands are still only partially explored, and some are almost unknown. The Philippines have eighty different tribes which are more or less savage. Some are very degraded and others semi-civilized, although they are pagans.

In our trip over the mountains we see the Igorrotes (ēg-gōr-rō'tās), who have their own towns and villages.

They are a fine-looking race, tall, strong, and well formed, with brown skins, high cheek bones, and aquiline noses. They are warriors, and we are a little careful how we address those who have spears in their hands. The Igorrotes on ordinary occasions wear but little clothing, except a breech cloth and perhaps some tattooing. We see many thus clad at work in the fields. They have little farms on the foothills of



An Igorrote.



Native of Luzon.

northwestern Luzon, which they plow with carabaos and sometimes irrigate with rude aqueducts. They raise coffee, rice, and tobacco, as well as sweet potatoes and corn. They mine iron and copper and are skilled blacksmiths, making excellent lances and swords.

We catch glimpses of other wild tribes in the different mountain regions, but the languages are strange and the

natives sometimes unfriendly. We have heard that there are head hunters and cannibals among them, and although we can hardly believe this, we decide to let them alone as long as they do not molest us.

Most of the natives we meet seem more afraid of us than we are of them. This is especially so of the Negritos (*nā-grē'tōs*), who are said to be the aborigines of the islands. They flee at our approach, and we sometimes catch glimpses of them as they hide behind rocks, peeping out at us as we pass.

What curious people they are! The word "Negrito" means little negro, and this word describes them. They are a race of black pygmies with woolly hair, thick lips, and flat noses. Most of them are naked save that the men wear a cloth about the loins, and the women a strip of cotton or bark forming a sort of skirt that reaches from the waist to the knees. Some women have also strings of beads about their necks.

How ugly they look! Their legs are spindling, their stomachs swell out, and their foreheads sink in. They are mentally and physically weak and are as degraded as any savages we have yet seen. They offer sacrifices to spirits which they believe to exist in the woods and mountains.

The Negritos have no fixed habitations, but wander from place to place, sleeping in caves and in little shelters of bamboo poles bound with grass. Some grow patches of rice or Indian corn, but most of them live upon roots, wild fruits, and such game as they can find in the woods. They hunt deer and wild hogs with bows and arrows, and sometimes trap them with loops of rattan, spearing the

animals when they are so tangled up in the loops that they can not escape.

Many of the Negritos have been enslaved by the other Filipino tribes, and we may meet some of these little negro slaves as we go on with our travels; for these people are to be found throughout the archipelago.

Later, we make a trip up the Pasig River and in and along the coast of Laguna de Bay. We should like to



Mayon volcano.

visit the Mayon volcano at the southeastern end of the island, and the Taal at the southwest. The Taal volcano rises in a lake partially surrounded by mountains; it is a thousand feet high, and its steaming crater is more than a mile wide. The Mayon volcano is one of the most beautiful mountains of the Philippines, and it equals almost any other mountain of the world in beauty. It is almost a half mile higher than Mount Washington, and is a perfect cone from the top of which rise plumes of feathery vapor which can be seen for miles out at sea.

27. THE VISAYAN ISLANDS—THE HEMP INDUSTRY

WE have left Manila on one of the coasting steamers, and are now making our way from port to port through the Visayan Islands, which form the middle zone of our Philippine archipelago. They are of much the same nature as Luzon, composed of mountains and valleys with rich plains here and there along the coast.

The land is everywhere green. The plains are covered with plantations of rice, sugar, and hemp, and the mountains are so wooded that they look blue in the distance, rolling on and on in smoky masses until lost in the low-hanging clouds. The coasts are bordered with cocoanut trees which here grow at their best, and under them are silver-gray villages of thatched huts, with fishing traps on the beach, and fishing inclosures fenced with bamboos extending far out from the shore. We pass quaint boats with outriggers manned by brown-skinned men and boys engaged in catching and trapping the fish for which the waters are noted. Some are gathering *beche de mer*, and others the pearl shells off the coral islands of the group.

As we go onward, stopping at a new island every few days, we are surprised at the size of the Visayans, and also at their resources and vast population. These islands are of greater extent than all the other large island groups of the Pacific Ocean put together, excepting New Zealand. They have more than four times the combined population of the Solomons, the Fijis, New Caledonia, Samoa, the Carolines, and the Hawaiian Islands, and

more than one third of all the people of the Philippines. They have three hundred and fifty towns, ranging from fifteen hundred to twenty-five thousand inhabitants each, and more than thirteen hundred and sixty villages with a total population of about two and one half millions.

The most of the people are on the eight larger islands of the group; namely, Panay (pà-nī'), Negros (nā'grōs), Samar (sā'mār), Leyte (lā'ē-tā), Cebu (thā-vōō'), Bohol (bō-hōl'), Masbate (mās-bā'tā), and Romblon (rōm-blōn'). These islands are also the richest. They abound in hard wood and in hemp, sugar cane, coffee, tobacco, and rice. They raise many kinds of vegetables and all sorts of tropical fruits. Some of them are rich in iron, copper, and coal, and others have gold, silver, and lead.

The Visayan people are somewhat similar to the natives of Luzon, although they have a different language. They live about the same way, and their villages are not unlike those we saw north of Manila.

We stop at Cebu, the capital of Cebu Island, situated where Magellan made his treaty with the natives, and cross over to Mactan, just opposite, where he was killed. Cebu is one of the chief hemp ports of the Philippines, and we can now see how this important product is raised and prepared for the markets.

Do you know what hemp is? Every one of us has used it again and again. We have handled it as string and played with it as jumping rope. Some of our farmers bind their grain with it, our seamen use it to pull up and let down their sails, and it is made into all sorts of ropes from clotheslines to cables. Here in the Philippines the finer kinds are woven into cloth, and some varieties are

sent to Paris where they are made into hats, nets, and carpets.

Hemp comes from the fibers of certain plants found in various parts of the world. Manila hemp, which is about the best of all, is the variety produced in the Philippines. It is the fiber of the same plant family that produces the banana. The hemp plant looks just like a banana plant, being composed of many wide leaves wrapped round and round a central stalk, which, when full grown, reaches a height of fifteen or more feet. The outer leaves are of a beautiful green; they are about a foot wide and often ten feet in length. As they grow they branch out from the stalk, shading the ground. The hemp comes from the white inner leaves, which are wound tightly around the central stem, there being so many that the plant at its base is often ten inches thick.

As it stands in the field it is as crisp as celery, and it can be chopped off with a carving knife or corn cutter. Each leaf has countless fibers extending through it, and these, when cleaned and dried, form the hemp of commerce.

Hemp is raised in all of the Philippine Islands, and it is so largely exported that it brings in millions of dollars every year. Men are baling hemp in Cebu, and we see the fibers spread out on the ground and hung up to dry as we stroll through the town. Later on we go out on horseback with one of the natives to visit his plantation, passing buffalo carts loaded with hemp coming in. We go by vast fields of hemp, and our friend takes us through a mile or so of hemp fields on his estate to a place where they are harvesting the crop. We follow him closely for

fear we may get lost. It is noon, but the plants are so near together that their great leaves join and shut out the sun; there are no paths, and we can see but a few feet in any direction. Now and then we stumble upon a coconut tree, but, as a rule, there is nothing but hemp, hemp, hemp.

Here and there is an open place where a stalk has been cut, but sprouts are growing about the stump, and we are



Stripping hemp.

told that a plantation once started reproduces itself many times. In forming new fields the sprouts from the older plants are pulled off and planted, and three years after that time the crop is ready for cutting. The only cultivation necessary is to keep down the weeds and to set out fresh sprouts now and then.

Let us watch them harvesting the hemp. Brown-skinned,

half-naked men chop down the plants and tear them apart, throwing away the green outer leaves and taking the long white inner ones on their shoulders to the strippers. The strippers squeeze out the pulp and juice by drawing the hemp over a log upon which a dull knife is so hinged that it can be forced tightly down upon the leaf to press the pulp out as the man pulls it through.

As the fiber comes out it is wrapped about a stick to keep it from breaking, and when finished it looks like a skein of fine silk. It now needs only to be dried in the sun to be ready for market.

After drying, the hemp is twisted up like hanks of yarn, and taken to the warehouses, where it is sorted and packed for shipment to all parts of the world.

Leaving Cebu, we call at the rich islands of Leyte and Negros to visit some of their sugar plantations, and then sail on to Iloilo (*ē-lō-ē'lō*), on the south coast of Panay. Iloilo is the second city of the archipelago and the chief port of the Visayans; it lies on an arm of the sea just off the strait, which runs between Panay and the little rocky island of Guimaras (*gē-mä-räs'*), having a wide and deep harbor.

The ground about the town is low and sandy, but there are mountains behind it. There are cocoanut trees on the edge of the city, and we hear the wind rustling through their green leaves as we ride in one of the small boats to the shore. We are again in the home of the cocoanut, and from now on shall see men gathering and drying



A bundle of hemp.

cocoanut meat for copra wherever we go. Nearly all the Visayan Islands raise copra for export, and vast quantities of it are produced in Mindanao and in the Sulu Archipelago still farther south.

We spend but little time in Iloilo. It is only a small city, its best houses made of stone covered with stucco, and the



"They are used for plowing."

poorer ones of poles thatched with palm leaves. We shop at the stores, and visit factories and other establishments, but find them much the same as those of Luzon.

We take excursions out into the country either on horseback or in carts hauled by cattle with humps on their backs. They are similar to the sacred cattle of India, being as fine looking as a pure Jersey cow. They are used for plowing and all sorts of work



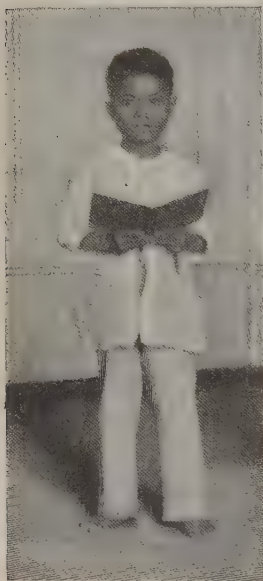
"That log is her water bucket.

The Visayans outside the cities live much the same as the natives of Luzon. They are huddled together in villages, and their houses are, if anything, more rude than those farther north. They are usually built well up from the ground, so that one has to climb to the front door on a ladder of bamboo poles. The ladders have rungs about as big around as one's arm, and we sit on them now and then as we chat with the people. The rungs, in fact, are the front steps of the huts, and we frequently see the little ones playing upon them, turning over and over, and crawling in and out as in a gymnasium or circus.

Out in the country the people have on less clothing than in the north. Little children wear cotton shirts which reach halfway to the knees, and the babies are often naked.

Other things are equally primitive. See that girl in the field over there with a log on her shoulder. That log

is her water bucket, and she is bringing a drink to her father. It is a bamboo tube six inches thick and twice as long as herself, with all the joints, except the one at the lower end, knocked out so that it will hold water. If she gives us a drink, we shall probably have to stand



A schoolboy.



A schoolgirl.

behind her and allow her to lower the tube to the level of our mouths, and the chances are, if we do so, we shall get a cold bath during the drinking.

Before leaving Iloilo we go to see our little brown cousins at school. The United States government has established schools in all parts of the islands, for it has determined that every Filipino shall have a good educa-

tion. The schools look much like ours, although the children of the same age are smaller. They are brown skinned, and they wear clothes which would seem odd in our schoolrooms at home. Every boy has his shirt outside his trousers, and both boys and girls are in their bare feet or in slippers without stockings.

We are surprised at the interest the children take in their studies. Every one throws up his hand as the teacher asks a question, and the answers are bright. The Filipinos are naturally as intelligent as we are, and quite as anxious to learn. They are being taught the principles of our government, and in time they will probably be as far advanced in American citizenship as our people at home.



28. MINDANAO AND THE MOROS

WE are on the beach at Zamboanga (thăm-bō-ăn'gà), on the great island of Mindanao, at the southern end of our Philippine archipelago. We are only about three hundred miles from the Equator; but the climate is by no means unpleasant, for the fresh air from the sea fans our faces, whispering a welcome as it sweeps through the palms overhead.

Mindanao is by far the most important of the southern part of our Philippine possessions. It is larger than Indiana, and although but little of it is inhabited by civilized people, it is one of the richest islands upon earth. Its soil will produce anything found in the northern parts of the archipelago, and it raises hemp, sugar, tobacco, and rice. It has all sorts of tropical

fruits, and also pepper, cloves, nutmegs, and cinnamon. There are coffee fields within a mile of where we are sitting, and cocoanut trees may be seen by the millions on the lowlands of the coast. They are very tall, and some bear so many nuts that a single tree could furnish one for every day of the year.

Mindanao is thought to be rich in coal, copper, iron, and gold. Its forests include teak, ebony, and Filipino mahogany, and its pasture lands support herds of horses, cattle, and carabaos.

The island is mountainous, three great volcanic ranges crossing it from north to south. The middle range is the highest, containing Mount Apo, an active volcano.

Mindanao is well watered. It has the largest river of the archipelago, the Rio Grande at the south; and in addition two hundred other rivers as well as numerous lakes, some of which are quite large.

This island is but thinly peopled. It is almost as large as Luzon, but it has not one seventh as many inhabitants, and most of its population is savage or at best semicivilized.

Many of the inhabitants are Malayan tribes known as Moros, of whom we shall see a great deal as we take a trip around the coast. There are also Visayans in the northern and eastern provinces, and in the mountains are Negritos and wild Indonesians.

We shall not dare travel through the interior unaccompanied by soldiers. Many of the mountain people are barbarous in the extreme. Some use poisoned arrows, some have human sacrifices, and others might hunt us for our heads like the head-hunters of Formosa and Borneo.

Some of the Mindanao tribes build their houses in trees, and others put them high up on bamboo poles, crawling into them on notched sticks which they pull up at night. In some tribes the men are naked, and the women wear skirts only about a foot long.

The Bagobos, who are found about the slopes of Mount Apo, wear ivory or shell earrings as big round as a cup. There is a small button on the inside of the earring which goes through the lobe of the ear. They wear clothes of grass cloth. The men have embroidered jackets and short trunks, and the women jackets and skirts which reach to the knee. Both sexes are fond of jewelry, and the women wear strings of bells about their legs over the calf and heavy brass rings on their ankles.

All these tribes are pagans, worshiping spirits which they believe to live in the trees and mountains. The most interesting people in this part of the world are the Moros, of whom there are many thousands in Mindanao, and also in the Sulu Archipelago, which we shall visit later on.

So far the Filipinos among whom we have traveled have been either Christians or pagans. The Moros are Mohammedans; that is, they believe in a religion founded by Mohammed, who was born in Arabia 570 years after Christ. This man claimed to have revelations from God which were collected into a book called the Koran. He had many followers, who spread his religion by the sword and in other ways, until a large part of the human race



A Bagobo.

came to adopt it. There are millions of Mohammedans in Asia and Africa, and also in the islands of Malaysia, and especially Borneo.

The Moros are supposed to be descended from the Dyaks of Borneo, who invaded this part of the world centuries ago. They were here when Magellan discovered the islands, and were so fierce that the Spaniards were not able to conquer them, or to keep them in complete sub-

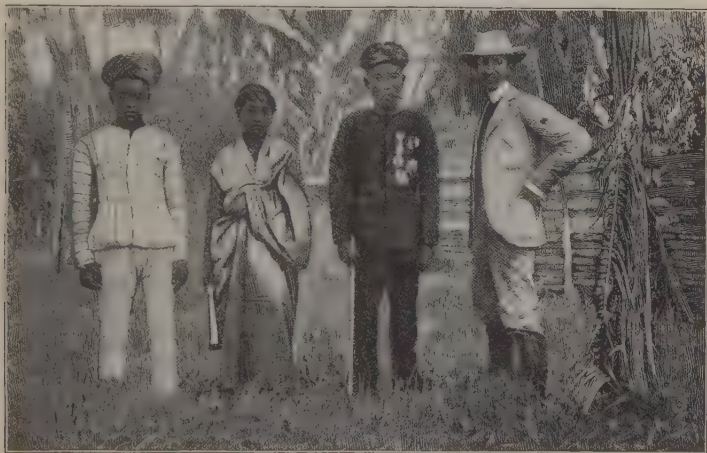


Group of Moros.

jection. For a long time the Moros were noted as pirates. They had fleets of war vessels in which they sailed from Mindanao and Sulu to different parts of the Philippines, robbing the villages and killing the people, or carrying them back home as slaves. This piracy was not stopped until the Spaniards sent steam gunboats to suppress it.

The Moros have their own towns and villages. They are largely fishers, but also do some farming in a rude way.

They are divided into tribes, each under its independent chief, or datto, and they have also several sultans to whom they owe a certain kind of allegiance. The dattos have the absolute power of life and death over their subjects, and until the Americans came, they could, if they wished,



A datto and his family, and Mr. Carpenter.

order any one to be killed. They frequently make war upon one another, each going out to battle with his fighting men. They are brave and apparently hold life of but little account.

Until recently all the rich Moros had slaves, and slavery still exists in some of the tribes, although the slaves are looked upon as members of the family.

According to the religion of Mohammed every true believer has the right to four wives, and we shall meet many Moros who have more than one, though very few have so many as four.

Such things, however, are being rapidly changed since the United States has taken possession of the Philippine Islands. Our government now rules the Moros through the dattos, allowing the people to govern themselves, but, at the same time, endeavoring to prevent them from committing crimes of all kinds. There is a large native town within a short walk of where we now are, and we can see the Moros at home.

We first take a stroll along the wide streets of Zamboanga, through which purling streams flow. The town is situated on the sea in a beautiful park facing the ocean. Its streets are lined with mango trees and cocoanut palms, and there are banana groves and coffee fields on the outskirts. Everything is the greenest of green, and strange flowers, swayed by the sea breezes, nod to us as we walk by house after house. The buildings are much like those of Iloilo, for Zamboanga is a Christian town, although it is our Mohammedan capital. Its population consists of Visayans, Chinese, and American officials and soldiers, and we now and then meet a Moro dressed in gay clothes and a turban. We cross a bridge, and within a short time find ourselves in one of the chief towns of the Moros.



29. THE SULU ARCHIPELAGO

WE are in the capital of one of the dattos of southern Mindanao. How different it is from our cities at home! All about us along the coast and back of it are hundreds of yellow and gray thatched huts, each fifteen or twenty feet square, built high upon poles under the

tallest of cocoanut trees. The floor of each hut is about six feet from the ground, reached by a wide ladder with round bamboo rungs. Some of the huts are quite large, and some have little verandas in front of them.



"Some of the huts are quite large."

Let us look into one. It has but one room; the floor is of bamboo poles covered with mats. There are no chairs or beds, and the people sit and sleep on these mats, men, women, and children lying down side by side.

The Moros are as strange as their houses. There are scores of barefooted, brown-faced men all about us, scores of brown-skinned, half-naked boys, and naked babies almost under our feet. The men wear turbans of bright colors, loose jackets, and skin-tight trousers in stripes of red, yellow, and blue. Some have straw hats over their turbans, ending at the crown in a tin cone, which shines

like silver under the rays of the sun. Every man and boy wears a great kris or sword at his belt; some have spears and lances, and others carry guns and are apparently ready to shoot. There are also brown-skinned women in long gowns, and little girls clad the same way; so that all together the crowd is the oddest we have yet seen.

It seems stranger the longer we look. How fierce these people are, and how different in appearance from the Tagalos and Visayans! Their faces are darker, their cheek bones are high, and they remind us of our American Indians. Notice their blood-red lips and black teeth. They all chew the betel and seem to think black teeth prettier than white ones.

Look at the woman laughing over there at the right. Did you ever see such teeth in your life? They are jet black and curve out at the front. They have been filed down with a stone, and she considers the curve a great beauty. All these women have their teeth filed in that way. The filing was done when they were grown up and ready for marriage. The operation is so painful that the girls often faint away under it, but it is the fashion, and all Moro girls want their teeth filed. After filing, the teeth are blackened, and the black is renewed every few weeks.

We ask our guide something about the Moro customs as we walk on through the village. He tells us that marriage is a matter of bargain and sale, and that a fine-looking girl can usually be bought for ten dollars, or for a carabao, and perhaps a few presents.

Strolling down the chief street of the village, we come to a house much larger than the others. This is the residence of the datto or chief, who receives us kindly, offer-

ing us cigarettes to smoke and betel to chew; but we refuse, thanking him for his courtesy. He tells us he is glad the Americans have taken possession of the country, and that he is proud of being an American citizen.

A few days later we leave Zamboanga for a trip around the south coast of Mindanao, stopping here and there at



A Sulu village.

various ports until at last we reach Davao (dä'vá-ō), a Christian town, at the head of Davao Bay, in the south-eastern end of the island. The mountains have been in sight all the way, and now as we sail up Davao Bay we see Mount Apo, out of whose sides clouds of vapor are rolling. At night the clouds are rosy with fire.

We spend some time at Davao, and from there make trips into the forests. The trees are so bound together with vines that we have to follow the streams or cut our

way through. There are monkeys of many kinds, some of great size and others not much bigger than your two fists. There are almost as many parrots as in Australia and New Guinea, and we often see flocks of white parrots with tufts on their heads, parrots of bright red with green wings, and other birds noted for their whistling and singing.

Mindanao has doves which have golden brown bodies and green wings, great white snipes, and strange birds as big as turkeys and of the same shape. It has white herons and wild pigeons three times as big as our pigeons at home. In the woods there are also wild hogs and deer of various kinds. The bird and animal life is wonderful, and we regret that we have not time to collect specimens to take home to our friends.

Leaving Davao, we sail back along the southern coast of Mindanao and then go westward to the Sulu Archipelago, which lies between Mindanao and Borneo. The archipelago consists of 188 islands, but they are so small that you could crowd them all into the state of Rhode Island and have space to spare. The larger islands are volcanic and high, and the smaller mere coral beds, a few feet above the level of the sea. The largest island is Tawi Tawi, which has a mountain range running through it, but the most populous and most important is Sulu. It is there that the sultan lives, and there American officials and soldiers are stationed to keep him and his people in order.

Outside of Sulu there is but little arable land, the chief exports being the pearl shells gathered from the seas of this region. Pearl fishing is carried on here much as in

Australia. The shells are shipped to Europe and to the United States, and according to custom the most of the pearls are given to the sultan.

We land at the port of Sulu (sōō-lōō'), where our soldiers are stationed. It is a delightful town of about a thousand inhabitants, mostly Christian Filipinos, Chinese, and Americans, and is on the edge of the sea. Sulu is surrounded by walls, and its streets are shaded by great trees, the limbs of which come together, making arbors which shield us from the tropical sun as we stroll through them. The houses are comfortable; most of them were erected by the Spaniards, who also stationed soldiers here to keep the natives in order.

The Moros live in villages along the coast or in the interior. Their houses are often built upon poles out from the shore, so that we walk over bridges to reach them, and so that the children can fish from the bridges or the front doors. The women never sweep, for the dirt falls down into the sea through the cracks in the floor.

The Sulu Moros dress much the same as the Moros of Mindanao. They are quite as fierce, and the men and boys all carry weapons. They have similar customs, and we are told that slavery was long common among them.

We take a horseback ride across the island to the town of Maibun (mī-bōōn') on the south coast, where the sultan has his capital. Maibun is just like the other Moro villages we have seen, only larger. It lies on the sea, and the most of it consists of thatched houses built upon piles. The sultan's guard meets us on the edge of his village and escorts us to his Majesty's royal palace, a

great barn of a house with nothing gorgeous about it. The sultan is not prepossessing, and he impresses us all the less favorably because he chews the betel and smokes during our audience. Our guide tells us that he is powerful because the Moros look up to him as a representative of their religion, and therefore think he has the right to rule over them.



30. BORNEO

BORNEO is so near some of the Sulu Islands that a fast steamer could go from one place to the other in a few hours; but our vessel is small, and the journey from Sulu takes more than a day. The weather is fine, and the breeze tempers the hot rays of the sun. We pass many islets covered with green, and see the American flag floating from places upon them. The water is smooth and so beautifully clear that when the ship stops at an island or so on the way, we hang over the rail and watch the fish swimming far down below us. The variety of sea life is such that it reminds us of the Fijis and the coral islands of the southern Pacific.

At last the mountains of Borneo come into view, a hazy blue line cutting the sky. They grow larger as we come nearer, and the shores, covered with cocoanut palms and other dense vegetation, are visible. Many fishing villages are now to be seen, built high upon piles like those of the Sulus. We wind in and out along the coast, and at last come to anchor in the beautiful harbor of Sandakan (săn-dā'kən), and land on Borneo, the third

largest island of the world. It is larger than any country of Europe with the exception of Russia, and more than twice the size of the whole Philippine archipelago.

Borneo is so large that we can hope to see but a small part of it. Its coast line is as long as the distance from New York to Liverpool, and if we would sail round it, we should have to hire a ship of our own, for there are no regular steamers. There are no roads through the interior, and our information concerning it must come from a visit to the principal ports, and what we can learn from maps and the stories of travelers.

This vast country has great mountains, mighty plains, and numerous rivers. It is wild in the extreme, and much of it has not been trodden by civilized man. The mountains and lowlands are covered with jungle and forest, the trees being bound together with rattans and other ropelike vines which make it almost impossible to cut one's way through. Many of the plains are flooded during the rainy season, and the rivers swarm with crocodiles.

Borneo is a land of wild animals, including elephants, rhinoceroses, boars, deer, and bears. It has a great variety of monkeys, some very small and others of enormous size, such as the orang-outang, a sort of man ape. This animal looks much like a human being, although it is covered with hair. When grown it is about four feet in height; it has long arms and short legs, and is so strong that it often kills the men who attack it. The orang-outang lives in the trees, swinging itself from branch to branch by its hands. It rarely comes to the ground except for food or water, and is inoffensive if unmolested.

The island has snakes of the most deadly kind and great pythons, some of which are thirty or forty feet long. There are flying lizards of a golden green color, and lizards which climb up the walls of the houses catching flies. There are butterflies, some measuring six inches across the wings, and myriads of beetles of



Orang-outang.

various kinds. The island is a world of natural wonders, as we shall see in our excursions out from the ports.

The people, however, are the strangest of all. The population is about two millions in number, almost all savages. There are many different tribes, but they are chiefly Indonesians, called Dyaks (dī'aks). Those on the coast near Sandakan are much like the Moros, and they live the same way. Those of the interior are more savage than the

wildest of our Filipinos, many of them practicing head-hunting and being by no means particular whose heads they take. They lie in wait for travelers and kill them if they can catch them alone or in small parties, in order to secure their heads as trophies. They dry the heads thus taken and hang them up in their huts. The man who has the largest number of human heads is thought to be



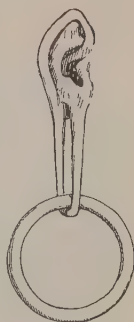
Dyak woman.

the bravest, and among some tribes it is said one is not esteemed of any account until he has captured at least one head. Some of these people believe that the persons whose heads they take will become their slaves in the next world, and others that a new head hung upon the walls of their hut will bring the family prosperity, and make it successful in all its undertakings.

The savages of Borneo, for whom we shall use the general term "Dyaks," look not unlike the best savage races of our Philippine Islands, although they are lighter in color, taller, and more active.

They wear but little clothing, the men of some tribes having only a band of bark or cotton cloth about the loins, and the women short petticoats of bark or cotton. In other regions both men and women wear jackets. The

Dyaks are fond of display and have many ornaments peculiar to themselves. Some of the women wear corsets made of brass or lead rings strung on strips of rattan, which they wind about their waists and the lower parts of their bodies. A woman so dressed looks not unlike a barrel walking off upon legs with the head and arms sticking out of the top. The brass rings are often highly polished, so that the girls appear dressed in coats of bright mail.



Dyak's ear.

Many of both sexes wear enormous ear plugs and earrings, some of which are as big around as a napkin ring. The holes in the lobes of their ears are so large that they can carry a cigar in them; and one traveler says he measured one that was seven inches long. We ask how such holes are made and are told that the ear is pierced during babyhood. The hole is very small at first, but it is stretched by putting larger and larger plugs in it, so that when the child is grown up, he has a loop or hole in his ear from one to four inches long.



Dyak's teeth.

The Dyaks file and blacken their teeth, sometimes so cutting the edges that they look like saws. They bore holes into the teeth and fit brass pivots in them; they also hollow them out like those of the Moros.

In North Borneo many of the Dyaks live in villages, some having small farms. They raise fruit and rice and also tobacco and sugar cane. Both women and men labor in the fields, but the women do most of the work. More

often, however, they are fishers and hunters, and very expert hunters they are. They use dogs to help them, spearing the game when the dogs bring it to bay. They shoot poisoned arrows through blowpipes and catch crocodiles with a sharp wooden stick to which a rattan rope is attached. They bait the stick by thrusting it through a



Group of Dyaks.

dead monkey. The crocodile swallows the monkey, and the sharp-pointed stick gets crosswise in his throat or stomach, and the harder he pulls the tighter it is fastened. After a while the crocodile is worn out, and he can then be pulled in and killed.

The natives of Borneo live differently in different parts of the island. In some tribes each family has its own house, and in others all dwell together in great thatched buildings with many compartments, each compartment belonging to a family. In some villages there are bachelors' flats where the young unmarried men sleep and where travelers are kept over night.

Their houses are generally upon poles high up from the ground, and in some places they are even built in

the trees. The buildings are much the same as in the Philippines, the walls and roofs being of the nipa palm and the framework of poles. Very little iron is used, everything being carefully fitted together, and the walls and roofs tied or sewed on with rattan.



"Their houses are upon poles."

All Borneo, although most of it is still in the hands of such savages, is now claimed by the British and the Dutch. The British possessions are by far the smaller. They include the states of North Borneo, Brunei (bröö'nī), and Sarawak (sā-rä'wāk) in the northern and north-western parts of the mainland. The rest of the island belongs to Holland, being under the administration of the governor general of the Dutch East Indies, whom we may visit during our travels in Java.

We spend a few days in Sandakan. It is the capital of North Borneo, and is therefore the residence of many

English officials and merchants. It has about seven thousand people, of whom perhaps half are Chinese. The English own the best stores, and their houses make Sandakan look more like one of the towns of northern Australia than like the Moro settlements we have just left. There is a good hotel, a newspaper office, and a museum in which we have a chance to see some of the curious things used by the natives.

The English have brought much of the land near Sandakan under cultivation; and we go out with them to visit their plantations of coffee, tobacco, and hemp. They show us places where vast numbers of rubber trees have been set out, and also cocoanut groves which they have planted to produce copra for Europe. We spend some time with the governor and other officials, and then take ship for Brunei and Sarawak along the west coast.

The journey takes several days. We skirt the shores, seeing everywhere the same rich vegetation and low, jungle-covered plains with great mountains behind them. We pass many Dyaks out fishing in their curious boats, and, sailing into Brunei, stop at the capital on a little river about fifteen miles from its mouth. We steam right up the river into the heart of the city and anchor among houses built upon piles. Some of the houses are apparently floating. The market is made up of stalls, each of which is a canoe, and the purchasers go from stall to stall in their boats. Brunei has a sultan, but as it is under English protection, it may be called a British possession. Our ship remains but a short time, and then steams on several hundred miles down the coast to Sarawak, which is also governed by the English.

Sarawak has a population of about four hundred thousand Dyaks and Malays. It is one of the richest of the Borneo states, producing gold, silver, and diamonds as well as gutta-percha, camphor, beeswax, sago, pepper, and tropical fruits. It became a possession of England in a curious way. In 1839 when the tribes inhabiting it were fighting against one another, and their sultan could not control them, a rich Englishman, named Sir James Brooke, who was sailing about these seas in his own vessel, landed and came to the sultan's aid. He took the management of the government and brought about peace and good order. He did so well that he was made the actual ruler of the country with the title of Rajah Brooke, and some time after that Sarawak was declared to be under British protection. It is still ruled by the descendants of Sir James Brooke, who govern the island somewhat like an English colony.

Our vessel stops at Kuching (*kōō'chīng*), the capital of Sarawak, a city of about twenty thousand people on the Sarawak River twenty-five miles from its mouth. The rajah has been informed of our coming, and we are well taken care of while we stay. He arranges a crocodile hunt for us and also a trip into the interior, where we have exciting adventures with monkeys and bears, and narrowly escape injury in our vain attempts to capture an orang-outang. The beast tears the flesh of our guide and then escapes through the trees.

Returning to Kuching we rest there a few days in the comfortable homes of the English residents, and then take ship for Dutch Borneo, landing at Banjermassin (*bán-yêr-mă'sín*), its chief city on the south coast.

31. THE DUTCH EAST INDIES

TO-DAY we begin our travels through the vast possessions belonging to Holland in this part of the world. They are known as the Dutch East Indies and include not only the greater part of Borneo and the western half of New Guinea, but almost the whole of the Malay Archipelago. They have a territory greater than the combined areas of our Atlantic states added to Indiana, Kentucky, Tennessee, Mississippi, and North and South Dakota.

Many of the islands are principalities in themselves. Sumatra is longer than the distance from New York to Chicago, and Java is longer than the distance from Philadelphia to Cleveland. The Moluccas have more territory than Ohio, Celebes (*sě'l'e-běz*) more than Missouri, Java more than New York, Dutch New Guinea almost as much as California, and Dutch Borneo more than any European country except Russia.

The most of this vast territory, with the exception of Java, is wild and unexplored. The islands are of about the same character as those parts of New Guinea and Borneo which we have seen. There are few roads, they are inhabited by savages, and we shall be able to visit only their coasts. Our chief travels will be confined to Java, the most important of all the islands where the Dutch capital is situated, and where the people are almost as civilized as our Filipinos.

Banjermassin, in Dutch Borneo where we are now, is built almost entirely upon the water. It lies on a branch

of the Barito River, the most of its houses standing upon piles so that the water flows beneath them when the river is high. The Barito is filled with craft of all description: great barges, steam tugs, little canoes, bamboo rafts, and floating houses. It has about forty thousand people, and is a place of considerable trade. It lies in the heart of a country rich in gold, diamonds, and coal.

During our stay we call upon the officials. They are Dutchmen who have been sent out from Holland to govern the territory. Many of them speak English, and they tell us much concerning the country. They say that the people are not unlike those we saw in the north and that they are ruled, as far as possible, through the native chiefs with themselves and other Dutchmen as advisers, and that this is the custom throughout the whole archipelago. The Dutch territory includes most of the island, but it is wild and almost unexplored.

After a day or so at Banjermassin our steamer goes on to Celebes, an odd-shaped island larger than any of the Philippines. Our first stop is at Makassar on the southwestern end. It is a thriving port with a good harbor. It has many snow-white buildings, the homes of the Dutch, and a vast number of bamboo huts shaded by bananas and cocoanut trees, the homes of the natives. The streets are filled with brown-skinned people, the men wearing about their waists bright-colored cloths which fall almost to their feet, and the women tight skirts and loose sacks of the same stuff. There are many Chinese and Arabs and a few Europeans. The natives remind us of our Filipino cousins, and we are told that many of them are Mohammedans.

We visit the sugar plantations and rice fields near the city, and make a few short trips out into the country, finding the vegetation not unlike that of the parts of Borneo we have just left. Taking ship again, we go around the upper end of the island to Menado to visit the coffee



Natives of Celebes.

plantations which are an important feature of this part of Celebes, and thence on east to the Moluccas, where Magellan's ships, after leaving the Philippines, loaded up with spices for their long home voyage.

Spices still grow in the Moluccas, and we stop at Amboina (ām-boi'nā), one of these islands, to visit the clove and nutmeg plantations.

Clove trees are of a beautiful green, many of them thirty or forty feet high. Some of them are covered with blossoms which range in color from the green buds to the bright red flowers of full bloom. The cloves are the blossoms which are picked when they are red. They are cured by smoking them over a slow wood fire. This turns them brown or black, and they are then ready for use. They are next packed up in bales and boxes and shipped to all parts of the world to be used in pickles and other such things.

Clove trees are planted and cultivated. They begin

to bear when they are six years old, after which they will yield up to about seventy years, each tree giving about six pounds of cloves every year.

Nutmegs grow upon trees not unlike our pear trees, but more beautiful. They have bright yellow blossoms and their fruit is more like a peach in color, although it is shaped somewhat like a pear. It is of the size of an apricot. As it ripens the pulp which is very thick splits open and shows the nutmeg or kernel surrounded by a network of crimson mace within. In preparing the fruit for the market, the pulpy outside is thrown away and the nuts are dried slowly in ovens. The mace is taken off and marketed as one spice, while the kernel itself forms another, the nutmeg of commerce. About a million and a half pounds of nutmegs and several hundred thousand pounds of mace are exported from the East Indies every year.



Nutmegs.

The nutmeg tree has its first fruit when it is ten years old, and after this it continues to bear a long time. A good tree annually produces about three pounds of nutmegs and one pound of mace. Raising nutmegs is carried on in the different islands of Malaysia, and the business is said to be profitable.

New Guinea is very near the Moluccas, and we have here not only Malaysians and Indonesians such as in the Philippines, but also many frizzly haired and dark-

skinned Papuans. We are getting outside the region of the Malays, and if we should sail directly south from where we are now, we should strike the coast of northern Australia not far from Port Darwin, which we visited on our trip round that continent. For this reason the Moluccas have many things similar to both New Guinea and Australia. It has pouch-bearing animals. There are cassowaries, parrots of many colors, birds of paradise, and kingfishers, one variety of which has a bright red bill and brilliant blue feathers.

Leaving the Moluccas, we sail on to New Guinea, merely touching the great island before again turning westward. The Dutch possessions in New Guinea are far larger than those of the English or Germans, but the country is so wild that we do not attempt to explore it. We buy a few spears and some bows and arrows of the natives for trophies, and also several red parrots and some skins of the birds of paradise, and then steam out toward the west on our long voyage to Java.

Our course is a little to the southward. We enter the channel between Wetter Island and the island of Timor (tē-mōr'), and sail along the coast of the latter, examining the shores through our glasses. Timor is about three times as large as Porto Rico. It is a volcanic island, as we can see from the ragged, rough mountains. The captain tells us that the people are almost all savages, and that it does not pay him to stop there to trade. Timor is about equally divided between the Portuguese and Dutch.

A little farther westward we pass Flores, a volcanic island as long as the distance from Philadelphia to Boston. Our steamer does not stop, for the most of the trading there

is in native sailing vessels. The chief exports are a peculiar kind of bird's nests, tortoise shell, wax, sandalwood, and cinnamon. The nests are found in caves ; they are lined and stuck together with the saliva of the birds. They are all shipped to China, where the natives boil them and make from them a clear soup of which they are very fond.

Still farther west we coast Sumbawa (sööm-bä'wä), noted for its volcanoes. The word "Sumbawa" means the land of fire, and this island seems well named, for we can see the steam rising in great clouds from some of its peaks. The crater of Mount Tambora is more than seven miles wide, and so large that a good-sized city might be dropped into it without touching the edges. The crater was caused by an eruption in 1815 when the whole top of the mountain, a mass higher and thicker than Mount Washington, was blown into the air. Before that time Tambora was thirteen thousand feet high. This eruption tore off about eight thousand feet, making so great an explosion that it was heard in Sumatra, a thousand miles away, and also on Ternate, nine hundred miles off in another direction.

Our captain tells us that when the eruption of Tambora occurred, the ocean for miles about was covered with floating timber. Ashes so coated the water that ships could hardly make their way through them, and they so filled the air that it was pitch dark in the daytime for hours after the explosion occurred. At the same time the whirlwinds lashed the sea to a foam ; they tore up the largest trees by the roots and carried men, horses, and cattle for miles through the air. A town lying at the foot of Tambora was swallowed up, for the shore sank, and the sea

came in and covered the earth to a depth of eight feet, and there it is to this day.

Notwithstanding this, there are still people living on Sumbawa. It has towns and villages, and the natives



"—with volcanoes in sight all the way."

work away as though they were not in constant danger of another eruption.

As we sail farther westward, we pass Lombok and Bali, other volcanic islands more thickly populated, and thence go on by Madura, an island where great quantities of salt are evaporated from sea water, and then along the north coast of Java with volcanoes in sight

all the way, until at last we come to the port for Batavia, the capital of the Dutch East Indies.



32. BATAVIA. THE DUTCH CAPITAL

WE are walking along the wide canal which runs through the principal street of Batavia. On each side of us quaint houses, with white walls and overhanging roofs of red tiles, look down upon and mirror themselves in the water. The buildings are like those in Dutch pic-



tures, and were it not for the palm trees, the orchids, the groves of bananas, and the little brown natives we see everywhere, we might imagine ourselves in one of the cities of Holland.

And so we are! Batavia represents Holland. It is the capital of the Dutch East Indies, a territory about sixty times as large as Holland itself. Away out here near the Equator the Dutch government has built up a town, almost European, which is largely inhabited by Dutch officials and merchants, and from here the vast population of this East Indian empire is governed.



Sado.

We reach Batavia by train, for it lies a few miles back from the sea. At the station we take sados, little two-

wheeled vehicles drawn by ponies, and ride along the canal to the upper part of the city. Our brown-skinned, turbaned drivers sit crosslegged at the front, and we have seats behind with our legs hanging down over the back, so that we get good views as we dash through the city. We pass many little stores owned by Chinese merchants, then go by better buildings, and at last reach Weltevreden (wel'te-vrā-dēn), where are the big hotels and where the most of the officials and Dutch merchants have their homes.

How beautiful it is! The houses are low, white structures painted to represent marble, each having a great veranda upheld by Grecian columns. There are people sitting on the verandas. The front doors are open, and we can see that the rooms are wide, airy, and comfortably furnished. Nearly every house has a garden about it. Here the drive is lined with royal palms, and there it is shaded by trees so gigantic and beautiful that you will not see their like outside of Java.

There is a store! Great plants stand on its porch and in the garden before it. Next door is the Hotel des Indes, a vast structure in the shape of an L with banyan trees and palm trees in its court. We pass the Royal Museum and its bronze elephant given by the king of Siam, and drive on through the beautiful parks for which Batavia is noted. As we go, we see that the city has electric lights, street cars, and all other modern improvements. There is a boy crying the newspapers. That building farther on is a college; we are again in a land of telephones, telegraphs, and schools. We enter the stores. They have all sorts of goods such as are kept in our stores at home. Most

of the clerks can speak English or German, and we have no trouble in supplying our wants.

Java is the most valuable of Holland's possessions in the East Indies. The Dutch have governed it since the beginning of the seventeenth century, and under them it has become one of the most prosperous countries of the world. It has a great commerce. Batavia, where we now



"Nearly every house has a garden."

are, is one of the principal ports, and Surabaya in eastern Java is another, while there are smaller cities on the north and south coast. Surabaya is larger than Batavia, its trade being with Europe and Asia and all the islands of this archipelago.

Java is very thickly populated. It is only a little larger than Luzon, but it has more than twenty-five million inhabitants. Of these all are Malaysians, with the exception

of a few thousand Dutch and several hundred thousand Chinese who have come here to trade.

The Dutch manage Java through the natives. The chief officials, including the governor general who rules all the Dutch islands of this part of the world, are Dutch appointed by the queen of Holland. The smaller offices are held



Native governor and servant.

by natives, who have Dutch officials whom they call their elder brothers, to advise them and tell them just what they must do. There are twenty-two residences or states in Java, each of which has a native governor, with one of these elder brothers to direct him. The elder brother will not permit the natives to be ill treated, and at the same time he sees that they pay the taxes necessary

for the support of the government. There are many native under officials, who are also helped by clerks from Holland, so that in reality the whole country is managed by the Hollanders, although the natives apparently govern.

This is so not only in Java, but in most of the Dutch East Indies. The Dutch have a large army to enforce their orders, but they do not oppress the natives, and are doing all they can to better their condition.

We take the train at Batavia, and in a short time reach Buitenzorg (boi'ten-zörg), where the governor general lives. We are received at the palace and are shown through the grounds about it, including the botanical garden, said to be the finest of the whole world. The governor general has a salary larger than that of our President. He lives in great state, and he often has soldiers with him when he goes about the country.

The Dutch think it necessary to impress upon the natives that they are very rich and powerful and worthy of being their rulers. They insist on the natives paying them and all Europeans proper respect, and in some parts of Java we shall see men, women, and children squatting down on the road as we pass, and holding up their hands toward us as though they were saying their prayers. This was the way the lower classes treated their superiors when the Dutch first came, and it is thus they treat the nobles among the natives to-day. No native is permitted to smoke in the presence of an official, and he must never come before one with his head uncovered. He must use a certain humble language when speaking to his superiors, and the superior has also a special language for servants.



33. THE NATIVES OF JAVA

LEAVING Buitenzorg we cross Java by railroad, stopping in the various provinces, visiting the cities, and taking long drives from place to place throughout the country. The roads are excellent, there are good hotels in the towns, and we have no trouble in making our way

Now we are entertained at one of the large plantations owned by the Dutch, and now we stop at a native village and study the people as they live in their homes.

The country is much like the Philippines, and the people are in some respects the same. They live in villages shaded with palms and other great trees. They have



"We stop at a native village."

gardens and flowers, and many own small tracts of cultivated land. They labor in gangs and walk long distances to their work. We see them marching out in single and double file in the morning and back in the evening. They are sometimes paid a share of the crop.

The native houses are huts often made of woven bamboo thatched with palm leaves. The walls are just like basket work, made in great sheets which are so thin that they can be bent like the cover of a wagon. They



"They cook on little stoves of clay."

are thus carried from one place to another, and we sometimes see a wall of this kind apparently moving along upon legs, the man carrying it being almost concealed within. The walls are tied to a framework of poles, and the floor is often made of bamboo.

The people sleep on low beds or upon the floor. They cook on little stoves of clay so small that they can be easily moved from place to place.

Almost every farmer's house has its rice granary beside it, and its rice mortar, where the women pound the rice out of the hulls as it is needed by the family. Many huts have pigeon cotes on poles beside them, and pigeons are to be seen everywhere.

The richer natives and the nobles have larger houses, some living in buildings of stone or brick like the Dutch. The masses, however, are exceedingly poor. They are

content with an amount equal to a few of our cents a day, and live from hand to mouth.

How queerly they dress! A very little cloth makes a costume for a man or woman. The ordinary woman's dress is the sarong, a strip of bright-colored cotton, which is bound tightly about the waist, and in the case of the woman falls to the feet. Above this is another piece of cotton wrapped tightly around the body under the arms, leaving the shoulders bare; and sometimes also a sack. The sarong is often so long that it forms the only article

of dress, being wound around the body under the arms and falling to the feet. Very few of the native women wear shoes and many of them go bareheaded.

The Javanese man has a waistcloth much like the woman's, although he tucks it under his legs and into the belt at the back. He frequently wears a jacket, and on his head a turban not unlike those of our Moros.



Javanese family.

How small the people are! The men are not much over five feet high, and the women still smaller. They are Malays, having yellow or light brown skins, high cheek bones, and eyes a trifle aslant. Their lips are thicker than

ours, but not so thick as those of the negro. They are plump and well formed, having slender limbs, small wrists and ankles, and long, slender fingers.

They are a kind people, full of good nature and laughter, although jealous, revengeful, and apt to be treacherous. They are very polite and gladly tell us all about themselves and their customs.

We learn that the natives are divided into three great races, according to the parts of Java from which they come. In western Java are the Sudanese, in middle Java and in a large part of the east the Javanese proper, and in eastern Java the Madurese, who also inhabit the island of Madura. Each of these peoples has its own language, although they are all similar.

The natives are mostly Mohammedans. They are not very strict in the observance of their religion, although every town has its priests, and there are large mosques in some of the cities.

In the distant past Java had many Hindus. The people worshiped the same gods that are now worshiped in Hindustan. They built great temples as did also the Buddhists, another religious sect which was once strong in Java. One of the greatest ruins of the world is that of Borobodor, situated in the central part of the island. It is a vast monument, rising to a height of a tall church steeple in terraces which are decorated with statues and wonderful carvings. It has more than three miles of carved figures, some no larger than one's finger, and some several feet in height. It has about five hundred statues of Buddha, and in the country about it there are other statues and wonderful ruins.

We stop often to visit the markets. They are found in all the cities and villages, and are most interesting places. They are made up of hundreds of little stores or bazaars under one roof. In some of the towns they are held in vast sheds, roofed with thin brick tiles, green with the moss of old age.

We spend some time in the markets of Jokjokarta (jōk-yō-kär'tà), wandering about through the many acres of little stores of all kinds. Each storeroom is a platform upon which the merchant, usually a woman, sits surrounded by goods. One part of the market is devoted to fruits and vegetables, and another to chickens and eggs; other parts have only dry goods and notions, while others sell hardware and jewelry, and, in short, everything used by the natives.

At the fowl market we see hundreds of pigeons of all colors, selling for an amount equal to about two of our cents apiece. The women dealers have little wooden whistles on hand, so made that they can be tied to the tail feathers of the birds. When so adjusted the whistle makes a shrill noise as the pigeon flies through the air, and thus scares off the hawks.

We visit the butcher shops where the women are selling meats, drug stores where they offer us roots and leaves for all sorts of ailments, including pills which they say will cure love-sickness, and make those who eat them fall in love with the giver. We stop at the tailor shops where men and women sit on the floor, working away on little hand sewing machines. Here is a girl making a silk jacket. She sits crosslegged on the floor, holding her machine between her bare toes as she works.



"Let us move on to the fruit stands."

Let us move on to the fruit stands and have a lunch of some of the things for which Java is noted. Do you like pineapples? Here is a girl selling some, fresh from the field. They are twice as big as our pineapples, and so ripe that their odor fills the air. We buy one for a coin worth two of our cents, and eat it while we chat through the interpreter with the women merchants about us. They see we are strangers, and bring up one fruit after another and ask us to taste it. We sample all sorts of bananas and oranges, eat a slice of the papaya, a large fruit like a ripe yellow muskmelon which grows on a tree, and rejoice in the mangosteens which look like dark red apples, but which are white as snow on the inside, and taste somewhat like a mixture of strawberries and ice cream. We are eating mangosteens when a maiden puts under our noses a durian as big round as a football. It smells like

a mixture of onions and very old cheese, and we draw back in disgust. Nevertheless, this fruit is much prized by the natives, and by such foreigners as can overcome their dislike for its disagreeable odor. The flesh is yellow, looking somewhat like custard.

Upon leaving we ask what all the fruit we have eaten has cost, and find it only a very few cents. We have no small coins, and are directed to the money changers or women bankers outside. Each sits on a platform with piles of pennies, half pennies, and other copper and silver coins before her, changing money for a slight percentage on every transaction. All the business done in the market is in a small way, and many purchases amount to less than a cent each. One does not need much to pay for a meal, and the natives require but little to live.



"The nobles wear a curious dress."

And still the better classes of natives spend a great deal. The sultan of Jokjokarta has a whole city surrounded by walls just opposite this market. In this inclosure he has his palaces and the homes of the people of his court, the stables of his many fine horses, a menagerie of tigers, lions, and other wild animals, as well as the state elephants which march in his royal processions.

The nobles wear a curious dress, consisting chiefly of a tall cap and costly sarong. When they come into the presence of the sultan, they must wear nothing above the waist and must leave their swords and other arms outside. When his Majesty walks out, a great golden umbrella is carried over him to shield him from the sun, and his nobles come behind bearing other umbrellas, forming all together a gorgeous procession. At such times the common people squat down and hold up their hands, for no one can stand before the sultan or be on the same level with him. This sultan has a large estate of his own, but he must govern it as he is told to do by the Dutch resident appointed from Holland.

It is the same with the sultan of Surakarta (sōō-rā-kār'tā), another province of Java. In these two provinces the people live much as they did when the Dutch first took possession of the island, but in the other provinces they have been awarded more rights and are more directly ruled by the Dutch.



34. SOME INDUSTRIES OF JAVA

THE principal products of Java are rice, coffee, sugar, indigo, and tea. Rice is the most important, for it is the chief food of the people. We see women everywhere hulling it. It grows on every hill and in every valley, and vast irrigation works have been constructed for it, making a large part of Java a network of canals, some as large as rivers and some as small as the tiniest brook. The people are everywhere working the fields.

Here they are planting rice, wading through the mud, and setting out, one by one, the stalks which have been raised in the plant beds. The next field may have men harvesting the crop, for rice will grow at almost any time of the

year, and the fresh sprouts and ripe grain are to be seen side by side.

At the beginning of the rice harvest the natives have picnics and feasts in honor of the occasion. They erect little temples to the goddess of the harvest, and place offerings of eggs, fruit, and sugar cane within them. In many



"We see women hulling rice."

of the fields shelters are built high up on poles for the children or their parents to watch the crop and scare off the birds. Sometimes strings are stretched from these places to different parts of the fields, so that by pulling a string a boy in the shelter can frighten the rice birds a long distance away.

We see many children working in the rice fields. Little girls cut and plant the rice side by side with their parents. Water buffaloes are used for plowing, and we often see naked little brown boys and girls riding the cowlike beasts through the furrows or to water.

In the lowlands of central and eastern Java we spend some pleasant days on the great sugar plantations, which

are usually owned by rich men from Holland. The planters have beautiful homes, and they live like lords on their estates, employing the natives to do the work. They have sugar mills as fine as those of the Hawaiian Islands, and they cultivate their fields almost as well. The ground is trenched to a great depth. It is drained and irrigated and made just right for sugar. The cane grows luxuriantly, forming a thicket through which it is almost impossible to make one's way. The cane is full of juice, and so sweet that we enjoy sucking the stalks whenever we are thirsty rather than drink the water which is often none too clean.

In this same region are indigo farms and tobacco plantations. Tobacco is raised much as at home, save that it is dried in immense sheds put up in the fields. Indigo comes from a plant which looks not unlike our ragweed, but which has a sap filled with coloring matter. The plants are raised in regular rows and their leaves, from which the best indigo comes, are



"The sugar cane grows luxuriantly."

picked off three times a year. The leaves are put into great vats of water. In a little while they begin to ferment, and after a time the coloring matter goes out of them into the water. This mixture is then drawn off and

boiled in a certain way, so that what is left turns to a paste or powder, which is the indigo of commerce. Sometimes powdered chalk is added to the juice, thus increasing the product.

Let us see something of the tea and coffee plantations. Java produces both of these articles in great quantities, and her tea plantations are among the largest of the world. We find some not far from Batavia. They are situated well up in the mountains, under the shadow of volcanoes long since dead. The tea plant is a small green bush of the same variety as the camellia, with leaves which look like those of the willow tree. The plants are raised from seeds in nurseries, and when they are eight or ten inches high, they are transplanted in ground prepared for the purpose. They must be hoed and weeded, and in about two years they begin to produce tea. They are not full grown until about six years, after which they will annually produce a pound of tea for many years. They have to be trimmed and well cared for. The leaves are picked several times a year; they are carried to the factories and cured in such a way that they form the rolled leaves we buy in the stores.

We are interested in watching the pickers. Thousands of little brown women dressed in bright-colored sarongs, which leave the shoulders and arms bare, are moving about among the green tea bushes. Here they are bending over the plants, and there sitting down and pulling the leaves and laying them on the great square cloths in which later they will bundle them up and carry them on their heads to the factories. All are bareheaded and barefooted. The sun gilds their skins, and their black hair

shines like jet. They are of all ages, some young and some gray haired. They are not pretty, but all are good natured and very industrious.

Here comes a party of pickers with bundles of tea on their heads on their way to the factories. We follow them, and at last come to some immense one-story buildings with walls of woven bamboo and roofs of galvanized iron.



Javanese women picking tea.

There are great stone courts about them upon which in flat baskets tea leaves are drying. There is tea drying on the stone floors inside the buildings, where are also great machines for rolling the leaves and preparing them for the markets. The leaves must first be wilted or withered. They are then put in rolling machines, and when they come out, each leaf looks like a little round worm. After this they are fermented and dried for the market.

Java coffee is noted all over the world. It brings high prices in our stores, and we buy vast quantities of it every year. It is to be found in many parts of the island, but it thrives best on the lower slopes of the mountains. We have seen coffee growing in Hawaii and the Philippines, and we find the trees here much the same as in other parts of the world. The variety which produces the best Java coffee is the descendant of plants which were originally brought here from Arabia. The trees are not large, and they seldom grow more than fifteen feet high. Their beans are noted for their fine flavor. Of late, however, owing to a disease, many of these trees have died out, and the Javanese have been raising Liberian coffee, a more hardy plant and less liable to the blight, as the disease is called. Its product has not the fine flavor of the Arabian coffee.

We enjoy our rides through the mountains. The roads are good, and the vegetation is so luxuriant that we pass between walls of green. There are palm trees and banana plants; there are immense forest trees and all sorts of winding vines which climb them and hang from their branches. The very plants seem to love one another. Some trees twist themselves about their fellows and grow up together. Even the dead branches are covered with green. They are clothed with moss and orchids, the flowers of the air forming a winding sheet about the dead limbs. There are orchids everywhere, and such orchids! Here one has wound itself about a branch like a necklace, there one squats like an opossum at the root of a limb, and farther out are masses of green with blossoms of many hues.

The forests are full of birds of bright colors. We see many monkeys, some big and some little. They jump from branch to branch, and from tree to tree. Some of them hang from the limbs by their long tails, and some squat in the forks of the trees or creep around the trunks, grinning and chattering at us as they do so.



Stripping cinchona bark.

Among the most interesting trees are those in the quinine plantations. The drug known as quinine comes from the cinchona tree; it is especially valuable for malarial fevers and other diseases, and is used for this purpose all over the world.

The cinchona grew originally only in the Andes region of South America, and for many years the quinine of

the world came from Bolivia and Peru. It was the product of the wild trees of the forests, the bark being gathered by Indians for the white merchants. Some years ago the Dutch government thought the tree might thrive in Java as well, and they sent men to South America for seed, which were planted in nurseries. They sprouted, and from them came the trees which are now found in many parts of Java. It was also found that the tree produced a bark quite as rich in quinine as the South American tree. To-day, about nine tenths of all the world's quinine comes from Java, and more is being produced every year.

It is on the mountain slopes about three thousand feet above the sea that the cinchona trees grow best. They are set out close together, but are thinned from year to year as they grow, the bark, root, and branches of the trees taken out being saved for quinine. At ten years the trees are full grown, and at this time the bark is removed. It is dried in the sun and then sent to the factories, where it is ground to a dust, boiled in kerosene oil, and so treated with acids and other preparations that it comes out the frosted silver, flaky powder known as quinine, ready to be made into pills. It is then packed in tins and shipped to New York, Amsterdam, London, and the other great drug markets of the world. The quinine we use comes from Java. We have some now in our medicine cases, and when in the future a pill or capsule breaks and the bitter stuff touches our tongues, we shall remember that it tastes much like the red bark of this tree which we have found during our travels in Java.

35. SUMATRA

WE have left Batavia, have passed through the Sunda Strait at the western end of Java, and are now steaming along the southern shores of the great island of Sumatra through the Indian Ocean.

How hot it is! We are approaching the Equator, and the sun's rays fall almost perpendicularly upon the waveless sea. Just now no air is stirring. The ocean seems a dead mass of molten glass which, reflecting the sun, burns our eyes as we look across it to the blue hills of the mainland. It is only where the ship cuts it that the sea is in motion. Our prow pushes it aside in great steel-blue waves which do not break as they roll outward, but go on and on, communicating their motion to the dead mass beyond until they are lost in this universe of water. At the stern we can see the track of the steamer, a wide pathway of wavelets extending behind us as far as our eyes can reach.

At last a wind springs up. It is rippling the glassy blue and painting millions of dimples upon its sapphire face. It cools our hot cheeks as we sit in our steamer chairs under the awnings on deck, and makes life more worth living. That wind comes from the mountains of Sumatra, the mighty chain which runs along through the western half of the island from one end of it to the other. Many of its peaks are more than two miles in height, and, although they are almost on the Equator, are crowned with perpetual snow.

The coast is low and covered with a dense vegetation.

Cocoanut trees line the beach. We see thatched huts built high upon piles along the shores, and now and then bigger houses with curiously shaped roofs farther back among the trees. We sail along from port to port, calling at the cities of Telok Betong, Benkulen (běn-kōō'lě̃n), and Padang (pa-dǎng') on the west coast, and then go clear around the island to visit the town of Medan in Deli (děl'ē) on the other side, from where we make our way down into the Strait of Malacca to Singapore to get a ship for Ceylon.

Our trip about Sumatra takes several weeks. The island is an enormous one. With the exception of Greenland, Borneo, New Guinea, and Madagascar, it is the largest island of the world. It is longer than the distance from New York to Chicago, and in one place its width is as great as the distance from Washington to Albany. It is more than three times as large as Java, and is of the same volcanic nature. Much of the western part is broken by lofty peaks, while opposite Singapore and farther east is a vast plain which is under water during part of the year. This is so of Lampong, the province nearest Java, the word "Lampong" meaning bobbing about in the water.

Other parts of Sumatra are made up of valleys and tablelands, some covered with forest, and others with tall, coarse grass. The vegetation is much the same as that of Java, save that the forests are denser and more bound together with rattans and other climbing plants. There are orchids everywhere, and many trees which bear beautiful flowers.

We shall see monkeys in all parts of the island, and

we are told that there are wild dogs and wild sheep, tapirs and tigers, elephants and rhinoceroses. The rhinoceros lives on the vegetation of the marshy jungles along the coast. It is very fierce when brought to bay, and can easily impale a horse on one of the two great horns which it has just over its nose. Its skin is so thick that the ordinary bullet has no effect upon it, and especially prepared balls are used for hunting it. The best place to aim is just behind the shoulders, as by this means you may reach the animal's lungs which, if penetrated, cause it to bleed inwardly and die.

We see natives at the ports and on our trips through the interior. Sumatra is thinly populated. It has only about one eighth as many inhabitants as Java, or about three millions in all. The people are largely Malaysans, but they are more fierce than the Javanese and more difficult to control. There are many tribes, each ruled by its native sultan, rajah, or prince, under the governor general of the Dutch officials sent out from Holland to act as elder brothers to the native rulers, and in some places there is so much rebellion that a large Dutch army is kept always on hand.

This is especially so in the province of Acheen (ä-chēn'), at the extreme northern part of the island. Acheen is as large as West Virginia. It was one of the first parts of Sumatra visited by white men; Marco Polo called there in 1291, and Queen Elizabeth of England made a treaty with its sultan. The Acheenese have been fighting foreigners for hundreds of years. They are Malays, who believe in the Mohammedan religion which tells them they will go straight to heaven if they die killing

Christians. Every man among them is a soldier, and every village has its company ready for service in time of war.

Acheen is rich in gold and silver, and in its production of tobacco, spices, coffee, and pepper. The Acheenese have cultivated farms. They are somewhat skilled in mining and manufacturing, weaving cotton and other stuffs, and they make beautiful articles out of gold and silver.

Just south of Acheen, and in central Sumatra, is the country of the Battaks, a nation of semisavages, many of whom live in the hills and on the plains about Lake Toba, a body of water similar to Lake Taal in Luzon. The Battaks are taller than the Javanese. Their skins are darker and more hairy. Some of them are Moham-medans; but in out-of-the-way places many are pagans who believe in three deities,—a creator, a preserver, and a destroyer. This same belief is held by the Hindus, and it may have come from India, for Hindus are supposed to have emigrated to Sumatra and mixed with the Battaks.

The Battaks are good people. They have little farms upon which they raise rice, corn, and vegetables. They rear stock, and have large pastures and feeding grounds. They make jewelry and arms which are beautifully carved. They weave and dye cotton, and all together have many civilized ways.

In all parts of Sumatra the people live in villages, and their houses are everywhere more picturesque than any we have seen since our stay in New Guinea. The houses have walls and timbers wonderfully carved. In

some villages they are built high up on posts with ridge roofs ending in sharp horns, covered with tin or laced about with the fibers of palm trees. As the children are married new additions are built, each having its horn, so that you can often tell the number of families in the house by the number of horns on the roof. The roofs



A village in Sumatra.

are thatched with palm leaves beautifully laid, and the houses all together are queer in the extreme.

In many of the villages there are club houses or balis where the people meet together to do business and enjoy themselves, and where travelers and visitors are entertained. There peddlers come to show their goods, there dances are held, and there weddings and funerals are celebrated. The club houses are larger than the ordinary

houses. They are built high up from the ground, and one must climb a ladder or stairs to get in.

The natives dress differently in different parts of Sumatra. It is so hot in some regions that the men wear little clothing except something about the loins, and the children nothing at all.



"They wear thick rings in their ears."

The women everywhere are fond of jewelry. They have gold and silver buckles to uphold their skirts or sarongs. They wear massive rings of gold and silver around their necks, and thick rings of a peculiar shape in their ears. They have rings not only in the lobe of the ear, but also in the rim, and these are sometimes so heavy that they have to be tied to the hair to keep

them from breaking the ear. The richer girls have sarongs of silk interwoven with gold and silver thread, and decorated with small coins. Some have breastplates of silver dollars, and necklaces of gold and silver. Among the poorer women brass, glass, or shells often take the place of the precious metals.

Sumatra is a very rich island, but parts of it are so unhealthful and marshy that they can not be cultivated. In the Lampong region and elsewhere coffee is produced equal to the best raised on the island of Java. The larger plantations belong to the Dutch, and they are managed in the same way as those of the Javanese.

We see rice fields nearly everywhere, and learn that rice is the chief food of the people. Many of the houses have rich granaries beside them in which the crop is stored in the sheaves and hulled out as needed.

Sago is also made in Sumatra. It comes from the sago palm, whose pith contains a starch good for food. The tree is cut down and the pith taken out and beaten to a dust. It is then put into a trough through which water is flowing, and rubbed to and fro in the hands until the woody fiber comes off and the sago sinks to the bottom in small, white grains. After this the sago is dried, when it is ready for use. Much of our sago comes from this part of the world. Most of us have eaten it in puddings and desserts.

Sumatra is noted for its tobacco and spices. Tobacco grows well almost everywhere on the island, but there is one region in the northwestern part, known as Delli, where the tobacco leaves are so fine and silky that they are in great demand all over the world as wrappers for cigars. A great business has grown up in raising these wrappers. The owners of the plantations are chiefly rich men from Holland, who have imported Javanese, Chinese, and East Indians to work their tobacco plantations.

We saw tobacco fields during our visit to the town of Medan, the chief port for Deli, and learned there how the crop is raised. The seed is sown in beds and later on the sprouts are transplanted in the fields. They grow rapidly, and at last reach the height of a man, when they are cut down. The leaves are then taken off and cured for export to all parts of the world.

There is one thing from Sumatra of which we all eat

more or less every day. Can you guess what it is? It is something we put in our food to season it; something that can be found in every kitchen at home. It is pepper. It is produced in large quantities in Lampong and in north-western Sumatra, where there is a region known as the Pepper Coast. Sumatra has been growing pepper for centuries, and it now supplies about two thirds of all the pepper used by man, exporting hundreds of thousands of pounds every year.

Pepper as it comes on our tables is usually ground to a black or grayish white powder. It is sold in this shape in the grocery stores, or it can be had in little dried balls which look not unlike black pills. These balls are the dried berries of the pepper plant, a climbing bush which when full grown is from twenty to thirty feet high. The plants are set out in cuttings so near together that twenty-five hundred can be grown on one acre. They are carefully cared for, and in three years begin to bear fruit. At five years of age they are full grown, after which they will produce fruit for ten or fifteen years more. Each vine produces a pound and a half or two pounds of pepper annually. There are two crops each year, one of which is gathered in January and the other in July or August.

The berries are first green, then red, and then yellow. When yellow, they are ripe. They are picked as they begin to ripen and laid out upon mats in the sun to dry. As they dry they turn black and are then the black pepper of commerce. White pepper is made by washing off the pulp of the ripe berry, leaving only the stone. This is of a pale gray or drab color, and it is known as white pepper.

36. SINGAPORE

WE have come from Sumatra to Singapore (sĭn-gá-pōr') in the Strait of Malacca. We are on a little island not far from the Equator, just off the southeastern end of the Asiatic continent, and so close to it that we could cross to the mainland in less than an hour. Singapore is so small that its size alone would hardly give it a place on the map, but its location is such that it has a greater trade than Sumatra and other islands several hundred times as large.

We have seen the value of our Samoan Islands, because they lie at just the place where ships can stop on their long voyage to and from Australia and North America, and also of the Hawaiian Islands, because they are at the crossing of the ocean highways between our continent and Australia and of those which connect us with Japan, China, and the Philippines. It is the same with Singapore. It is one of the great ocean stations on the route from Europe by the Suez Canal and the Indian Ocean to China and Japan and the other countries on the east coast of Asia. It is the port of call for vessels bound for the Dutch East Indies and the Philippines, and a great transshipping place for goods destined for Burma, Siam, and the islands about. All vessels going from India to China call here, and also some from Australia and Africa.

Singapore belongs to the English. They have made it a free port, so that no duties are charged on any goods coming in. This fact, added to its location and its excellent harbor, has made it the business center of this part of the world.

When the English took possession of the island, early in the last century, it was a tropical jungle inhabited by savage Malays and infested with tigers and poisonous snakes. Now much of it is as well cultivated as Java. It has beautiful roads and many valuable pepper, sugar, coffee, and sago plantations. The jungle has been cut away and a city of more than two hundred thousand people has grown up about the harbor. Fifty lines of steamships now connect it with different parts of the world, more than one thousand vessels visit it every month, and several miles of wharves have been constructed for them.

The commerce of Singapore amounts to several hundred million dollars a year, and great hotels have grown up to accommodate the traffic. The city has large stores, banks, and fine public buildings. It has newspapers, telephones, and electric lights, and were it not for the tropical vegetation and the odd-looking Asiatic inhabitants, we might imagine ourselves in one of the great seaports of Europe.

The people of Singapore are stranger than any we have yet seen. They are of all races, classes, and conditions. There are about 6000 Europeans who are dressed as we are, and more than 190,000 people from Asia and Malaysia, clad in all sorts of outlandish costumes. There are 150,000 yellow Chinese, thousands of black East Indians, thousands of brown Malays much like the natives of Java and Sumatra, and a large number of yellow Siamese, Burmese, and dark-skinned Dyaks from Borneo. There are fierce-looking men from Arabia in turbans and gowns, sober-looking Parsees from Bombay with hats like inverted coal scuttles, dapper young Japanese, and also Armenians and Jews. Each race

has its own costume, and we are lost in wonder at the strange sights of the streets.

Suppose we take a jinriksha and, starting at the wharves, drive about them and then go up to the city. What a curious way of riding! We each have a little carriage on two wheels pulled by a bare-legged, blue-gowned



"What a curious way of riding!"

Chinese, who trots along inside the shafts. The carriage is just large enough for one or two persons. It has good springs, and we ride as easily as though it were drawn by a horse instead of a man. We touch our human steeds with our umbrellas when we want them to stop, and now and then poke them to make them go faster. The charge is only ten cents an hour, and we can ride all day for less than a dollar.

We stay a while at the wharves, watching the great steamers being loaded and unloaded by Chinese and East Indians. The East Indians have little more than one cloth about their heads and another about their loins, and the sweat stands out upon their black skins as they work. The Chinese are almost as scantily clad, and they have tied their long cues about their heads to keep them out of the way.

Here is a ship taking on coal. It has come from Calcutta and is on its way to Hongkong. A platform has been built up from the wharf to the deck of the steamer, and a score of Chinese are working in couples. Each couple has a great bag of coal hung to the center of a pole which rests on their bare shoulders, and they trot along, without bending, from the warehouse to the steamer. That coal came from England. It has traveled thousands of miles from its home in the earth to this ocean station to feed that Indian steamer trading with China.

The vessel just beyond is unloading bars of iron from Belgium. They are taken by black-skinned Klings in carts up the wharves to a ship bound for Sumatra. The carts are drawn by bullocks with straight horns and big humps on their backs. They are of the same breed as the sacred bulls of India, but in Singapore they must work for their living instead of being worshiped as in Hindustan. Their drivers have red turbans, and white cloths about the loins.

Notice, too, how commerce brings things from all parts of the world to its great exchanging stations. There are goods of all kinds scattered over these wharves. We see a box of electric arc lamps from New York marked

Bangkok, Siam ; sugar machinery from Germany marked Batavia, Java ; and bales of cotton from Bombay for Deli, Sumatra ; cases of goods from Paris for Cochin China ; and porcelain from Japan for Rangoon, in Burma.

There are all sorts of merchandise from the islands and countries of the far East destined for Europe. There is a vessel unloading pearl shells to be transhipped to London. Those great bundles of rattan have come from Borneo ; that coffee is from Sumatra, as are also those huge bags of black pepper. A boat full of rice from Siam is just coming to anchor, and a vessel behind it has the flag of Japan floating over it.

But see, there is Old Glory ! The stars and stripes, the red, white, and blue ! They are at the mast of a magnificent gunboat. We wave our handkerchiefs and burst into cheers. That is one of our men-of-war on its way to the Philippines. It came from New York through the Strait of Gibraltar, crossed the Mediterranean, passed through the Suez Canal, and over the Indian Ocean to Singapore. It will stay but a day and will then steam on to Manila.

Let us tell our coolies to turn their jinrikshas and take us into the city. The roads are as hard and as smooth as stone floors, and the men go on the trot. They dart in and out of the throng of carts, drawn by humped Indian cattle and driven by Klings, carriages hauled by horses imported from Australia with coachmen in livery, English officers on foot and on horseback, and the many other strange characters which inhabit the city.

We pass Kling women, as black as our shoes, clad in white cottons and red calicoes, but blazing with jewels. They have bracelets on their arms, rings about their

ankles, and even rings on their toes. Many wear earrings, and some have buttons through the rims of their ears as well as plugs in the lobes. We see Malay women who half hide their faces as they pass, and Chinese girls dressed in silk hobbling along on their small feet.



A family of Klings.

At every corner stands a tall Sikh policeman with a red turban on his head, which makes him look taller still. There are Indian merchants with caps embroidered with gold, Chinese merchants in gowns of fine silk, and rich Malays wearing skirts of red and caps of bright-colored velvet. There are children as queerly clad as their parents, and not a few little ones who have no clothes at all.

We stop at the post office to mail letters home. We

go on to the stores and are glad to find that even the native clerks speak English. The most of the retail business is done by the Chinese, who have many small shops. The Chinese are also large capitalists, doing business of every description.



Sikh policeman.

Later on we drive out into the country, passing the great house of the governor who rules not only Singapore, but several other English colonies which make up what is known as the Straits Settlements. The governor is appointed by the king of England. He has a house finer than the White House at Washington, situated on a hill surrounded by magnificent grounds of a velvety green dotted with tropical trees and beautiful flowers.

Farther on are the barracks where the soldiers who keep the colony in order live. From there we go for a long drive into the country. Everywhere the roads are lined with great trees; giant bamboos hang over them, there are palms of many kinds, and all together we seem to be in a tropical park save where the jungle is yet unreclaimed.

On the opposite side of the island from Singapore city we take a little boat and cross to Johore on the mainland, merely to say we have set foot upon Asia, and then return to drive back to our hotel. Our journey has taken all day, and it is dark long before we reach Singapore. We go rapidly, holding our guns on our knees for fear of the

tigers which are so frequently found in the jungle that it is not at all safe to be out in the wilds after dark.

It takes us some time to decide where to go next. We might visit the Nicobar Islands, a little group belonging to Great Britain northwest of Sumatra, inhabited by Malays who devote themselves chiefly to raising cocoanuts. Or we might go on farther north to the Andamans, which are also under the British flag, where the natives are much the same as the Negritos we saw in the Philippines, and where the British have colonies of convicts. Neither group, however, is of much importance, and we shall proceed to Ceylon. There is a steamer in the harbor ready to start, and within a short time we are well on the way.



37. CEYLON

WE have been five days on the Indian Ocean, sailing through summer seas, and are now in the harbor of Colombo surrounded by ships from all parts of the world. There is a steamer coming in from Calcutta, and we have just passed one bound for Sydney, Australia. Our own vessel is a Japanese ship which we got at Singapore, and in the harbor are steamers from Africa and different parts of Asia.

Ceylon is another great oceanic crossroads station, and we are now in its chief port. It is a beautiful island. We can see the cocoanut palms lining the coast and the great mountains far behind them. Ceylon has plains at the north and around the coast, but in the interior the mountains rise to a height of more than a mile and a half above the level

of the sea, and they are so beautiful that Ceylon is called the "Pearl of the Eastern Seas."

The Arabs had several traditions concerning it. One was that Ceylon was the site of the Garden of Eden, and another that it was here Adam fell when he was cast out of the garden. The mountain upon which he dropped is still known as Adam's Peak, and a little temple has been built upon it in which the Buddhists worship to-day. According to one story, Adam walked from Ceylon to the mainland of Asia on the reef of coral and sand bank which connects the island with Hindustan. This reef is still known as Adam's Bridge. These stories are only tradition, but nevertheless it is interesting to know them.

Ceylon has the shape of a pear with its stem toward India. It is about as large as the state of Indiana; it is 270 miles long, and about 140 miles from coast to coast at its widest part. Its soil is everywhere rich. In the southwest are groves of cinnamon trees, in the interior cacao, coffee, and tea plantations, and about the coast miles and



miles of cocoanut and other palms. Off the coast are pearl fisheries, and in the mountains valuable minerals and also rubies, sapphires, garnets, cat's-eyes, and other precious stones. In fact, the pear has so many rich things in it that it makes us think of the apples of gold in the Garden of Hesperides.



Adam's Peak.

This beautiful island was taken by the Portuguese about thirteen years after Columbus discovered America. In the middle of the next century it came into the hands of the Dutch, and later into the hands of the British who now govern it, sending out rulers from England.

The country is divided into nine provinces. It has a large population, composed of Cingalese, a light brown people who came across from India; of Tamils, another

Indian people who are darker; of Malays, not unlike those we have seen farther east; and also of Chinese, Arabs, and Mohammedans called Moormen.

The Cingalese are Buddhists, and there are many Buddhist priests whom we shall know by their yellow robes, which they drape so as to expose the right shoulder. They shave their heads and frequently go about with begging bowls in their hands, asking every one for something to eat or a gift for the church. The Cingalese wear tortoise-shell combs in their jet-black hair.

We have now left the ship and are making our way through Colombo. The city is well laid out with large public buildings. The crowd on the street reminds us of Singapore, although it is, if anything, wilder and more strange. Those men with the dark coats or jackets, over petticoats of white cotton, are Cingalese. You can see the tortoise-shell combs on their heads. Some of them part their hair in the middle and put it up in a sort of knot at the back. Were it not for their beards, we might think them women.



Cingalese man.

The Cingalese women wear plaid skirts, and loose, white jackets; they tie their hair in a knot at the back, and many go bareheaded. Nearly all are barefooted, and some of them have their feet covered with jewelry. They have anklets and toe rings, and often the whole foot is decorated with chains of silver and gold. They have rings on their

fingers, about their necks, and in their ears, and also buttons and rings in their noses.

Suppose we take a ride in one of the bullock carts which we see dashing about. The cattle are like those of Singapore, but in Ceylon they are used for carriages as well as for drays. We make a bargain with a half-naked, black



Cingalese girl.

driver, and he keeps his bullock in a fast trot upon the promise of a small extra fare. He takes us to the Cinnamon Gardens, where we see the museum, and then into Queen Street, past the governor's palace. We drive out through the country, hurrying under the palm trees, which hang over the roads for fear that a ripe cocoanut may drop on our carriage as we drive by. We pass beautiful

villas, and see mahogany trees, bamboos, gutta-percha trees, and old banyans, which cover the ground like gigantic umbrellas. We next drive along the harbor to watch the brown-skinned fishermen sailing about in their catamarans, long, narrow, canoelike boats with square sails and with logs fastened outside them to keep them from tipping over and throwing the men into the water.

The following day we take the railroad train to Kandy, in the mountains, seventy-four miles from Colombo. The ride is a beautiful one. The train climbs the hills through terraces of rice fields, through jungle and forests ablaze with orchids, and lands us in a cool, quiet nest in the

mountains. It was hot at Colombo, notwithstanding the sea breezes, for Ceylon is not far from the Equator, and we enjoy the bracing air of the hills. We remain a few days seeing the temples and visiting the botanical garden for which Kandy is noted, and then make several trips here and there over the island before we go back to Colombo.

Some of our most interesting travels are in the tea, coffee, and cocoanut plantations. They are owned by English, Irish, and Scotch, who employ the Cingalese to cultivate them, using the Tamils for the harder kinds of labor. The crops are grown much the same as in Java, the products being chiefly exported to Europe.

The cocoanut estates are especially interesting, not only from the vast amount of copra produced, but from the uses which the natives make of the tree and its nuts. The tree forms the building material for their huts, including the roofs. From the bark and leaves they make sheds, fans, and matting, and from the fiber, fishing nets, ropes, and sails. Some of the natives wear clothing made of the net which nature weaves about the roots of the leaves. The ripe fruit when pressed gives them oil for their lamps and for cooking, and they also use it on their hair and skins. They make a salad of the young leaves, they drink the milk of the green nut, and use the meat of the ripe nut for food. They make a medicine from the flower, and sugar and wine from the sap. The shells are used for drinking cups, spoons, and bottles, and the trunk of the tree, hollowed out, forms an excellent boat.

Ceylon has orchards of cacao trees from the seeds of which chocolate is made, and also cinnamon trees whose

bark we use so largely in pickles, candies, and desserts. The cinnamon tree is a species of laurel, with leaves of a bright, glossy green, and bark composed of thin, separate layers, containing a spicy sap very pleasant to taste. The outside bark is rough and gray and the inside smooth and reddish.



A country road near Colombo.

The cinnamon tree as it grows in the forest is as large as our pear tree, but the cultivated varieties are kept trimmed down to about eight feet in height. They are planted from the seeds and grow rapidly, sending out strong shoots from year to year. The more the trees are trimmed the more shoots they have, and it is from them that the cinnamon bark of commerce comes. When the shoots grow to the length of an ordinary cane, they are cut

off and stripped of their bark. The bark is dried in the sun, and then packed up in bundles, to be exported to Europe and other parts of the world. Sometimes it is ground and sold as a powder, and sometimes an oil is made from it which is used for medicinal purposes.



38. MAURITIUS AND REUNION

WE are again on the Indian Ocean, steaming along toward the great island of Madagascar, off the east coast of Africa. Our ship is an English vessel from Colombo, bound for Mauritius, which belongs to Great Britain. The weather is warm, but we have awnings over the deck and enjoy a stiff breeze most of the way. We pass the Maldivé Islands shortly after leaving Ceylon, going so close to them that we can see the cocoanut trees on their shores and the spray of the waves dashing up on the white beach. The Maldives are seventeen atolls, inhabited by a small population of Mohammedan Asiatics, and are of little commercial importance. They are ruled by a sultan under the protection of Great Britain. Very similar to them are the Lacadives, other atolls almost directly north.

Shortly after this we cross the Equator and go on to the southwest, between the Seychelles (*sā-chě'l'*) and the Chagos Islands, two other unimportant groups belonging to the English, and finally come to anchor, about eight days from Ceylon, in front of Port Louis, the capital of Mauritius.

We are on the western side of the island, under the

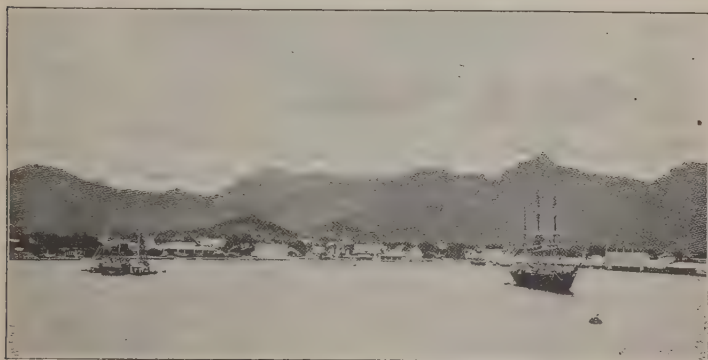
shadow of rough, ragged mountains, at the wharves of a little city shaded with cocoanut, mango, and other tropical trees. The vegetation reminds us of Ceylon. There are oranges growing in the gardens, and banana plants hang over the fences and whisper a welcome as we walk through the streets.

We are met on the docks by a motley crowd of East Indians, Arabs, Chinese, and black-skinned Africans, some of whom offer to guide us about. We see bags of sugar piled up on the wharves, and in some parts of the town the air smells like new-made molasses.

Mauritius is famous for its sugar. It was little more than a forest when it came into the hands of the English about a century ago, but they have turned it into a sugar plantation. They have brought laborers from India, Africa, and China to work the cane fields, and millions of pounds of unrefined sugar are now exported every year. The island is only about one fifth as large as Porto Rico, but it is thickly settled on account of the rich soil. It has more than two hundred thousand Hindus, and a large number of Africans and natives of Madagascar. Many of the Hindus and Chinese have saved money and now own plantations themselves. They have stores in Port Louis, and much of the business is done by them.

We ride out on the railroads which lead from the capital to different parts of the island, now passing through a cocoanut grove, and now getting a glimpse of a vanilla plantation. Most of the way is through sugar estates, where dark-skinned men and women are working away plowing, planting, and cutting the cane. We stop at a factory to see the juice pressed out and made into sugar,

and then return to Port Louis just in time to catch the boat for Reunion, a little island belonging to the French, 135 miles away and not far out of our route to Tamatave (tä-mâ-täv'), the chief port on the eastern coast of Madagascar.



Port Louis.

Reunion is of much the same character as Mauritius, save that it is a little larger, more mountainous, and less fertile. Its chief port is St. Denis, a city of about thirty thousand people, made up of East Indians and Africans, with many French merchants and planters. The language is French, and we find it hard to make ourselves understood.

We take trips out into the country, visiting the sugar plantations and also those which produce coffee, cacao, and vanilla. From the vanilla plant comes the extract which we use for flavoring puddings, cakes, ice creams, and candies. It is a climbing plant, with a long, fleshy, fruitlike pod from which the extract is made. The plants are grown from cuttings set out in the shade. They are trained upon stakes and carefully cared for. At three



Vanilla plantation.

years they produce fruit, after which they bear for many years. We walk through the plantations under the trees, now and then pulling off a pod and biting into it, trying to imagine that it has the flavor of the vanilla ice cream which tastes so good at our homes, but which, alas! it is impossible to get away out here in this hot Indian Ocean.



39. MADAGASCAR—THE EAST COAST

IT is almost four hundred miles from St. Denis to Tamatave. The voyage takes about two days on our slow-going steamer, and it is early morning when the cabin boy tells us to get up, for we are in sight of Madagascar. We jump from our beds and look out of the portholes. Our

vessel is sailing along a low coast, densely wooded, and backed by high mountains covered with green and half hidden in low-hanging clouds. That coast is a part of Madagascar, an island almost as long as Sumatra and of the same general shape, although wider.

Madagascar consists of two great natural divisions: an interior plateau rising several thousand feet above the sea, with mountain peaks, some of which are almost two miles in height, extending above it; and a comparatively level country surrounding the highlands and sloping down to the sea. The interior plateau, owing to its altitude, has a good climate; but the low coast lands are unhealthy and malarious. They are bordered with a dense belt of forest which extends far up the slopes of the plateau; and upon the plateau itself are rolling prairies covered with grass and spotted with farms. The island is rich. Its soil is fertile, and its mountains have deposits of gold, copper, iron, sulphur, and lead.

We are now about halfway down the eastern coast, approaching Tamatave, its principal port. Now our steamer turns and moves slowly in toward the shore. We pass through an opening in the coral reef, and come to anchor at a long pier in an excellent harbor before a town unlike any we have yet seen.

There are cocoanut, mango, and bamboo trees close to the beach, and back of it is a city of one-storied and two-storied, bright-colored houses, with a church tower or steeple here and there rising above it. Off at one side are many thatched huts, the homes of the natives, and behind are cultivated lands extending to the hills. The town is low and sandy, and right on the beach.



Boats rowed by black-skinned men with white sheets wrapped around them come out to the steamer and take us ashore. As we land, other white-gowned men lay hold of our baggage, and carry it upon their shoulders or their heads up the sandy road to the hotel. The way is well shaded; it is lined with little peaked roofed houses with gardens about them.



Natives of Madagascar.

The street is crowded, and we move in and out of a throng of whites, yellows, browns, and blacks, all curiously clad. The whites are the French and other Europeans who live here to do business or take part in the government; some of the yellows are East Indians engaged in trade; and the browns and blacks are natives of Madagascar, some from the interior and some from along the coast.

How odd they look ! Many have woolly hair and black skins, and are almost negroes in features, while others are brown, and more like the Malays or East Indians. The blacks are Betsimisarakas (*bet-sim-is-â-râ'kàs*), a tribe found along the east coast; the others are Hovas, a more civilized people who live on the plateau which forms the most of the interior, and of whom we shall see more later on.



"She is a Hova woman, riding in a filanzana."

Notice how the natives are dressed. The men wear great straw hats, and they have white cotton cloths draped about their dark bodies, leaving the legs and feet bare. The women wear high-waisted gowns of bright-colored calicoes, which make them look tall. They are straight, and some are by no means bad looking. How their hair shines ! They wear no hats, and their hair is put up in little braids which stand out all over their heads,

or are fastened together with string. They grease the hair with cocoanut oil, the rancid odor of which is borne by the wind to our nostrils. See their bare feet! That wide space between the first and second toes comes from wearing sandals.

Some of the people are squatting on the streets chatting; others are moving to and fro carrying burdens. There comes a porter bringing hides to the steamer. The hides are hung upon a pole which rests on his shoulders. Beside him walks a poor woman with a water jar on her head and some roots in her hand. Both stop as we pass them.

See that woman coming down street high up between poles on the shoulders of men! She is a Hova woman, riding in a filanzana, the cab or carriage of Madagascar. The filanzana is merely a seat with a leather back, and a rest for the feet, swung between two long poles, and fastened to them by bars of iron. The poles are borne by men, two in front and two behind, who thus carry travelers through the streets and over the country. Until very recently there have been no wagon roads, and it is in filanzanas that we shall travel through some parts of the interior.



40. THE HOVAS AND THE CENTRAL PLATEAU

THE port of Tamatave where we now are is the chief gate to Madagascar. It is regularly visited by the steamers of several French shipping companies, and occasionally by boats from other parts of the world. At the extreme northern part of the island is the harbor of Diego-

Suarez (dē-ā'gō-swä'rās), and on the western side, the port of Majunga (mä-jōon'gä), at the mouth of the Betsiboka River, from where we sail to Zanzibar after crossing the island.

Much of Madagascar is so wild and unexplored that the exact population is not known, although it is supposed to be about three or four millions. Along the coast, and north of where we are now, live the Betsimisarakas and other tribes; on the west coast are the Sakalavas (säk-ä-lä'väs), whose ancestors probably came across Mozambique Channel from Africa; while on the plateau to the south are the Baras and Betsileos, who are also of African descent.

The most important people are the Hovas, in the central part of the great plateau, who number at least one third of the whole population. They have brown skins and straight or wavy hair; they look not unlike Malays, and are supposed to be the descendants of Malays who emigrated to Madagascar centuries ago.

The Hovas were, for a long time, the ruling race of Madagascar. Their territory was large, and they administered it in a semicivilized way. They had their own monarchs, and held more or less intercourse with other nations of the world. Within the past few years, however, the French, who have long laid claim to Madagascar, have taken possession of the island and subdued the natives, making it a French colony. They have deposed and banished the queen of the Hovas, and have chosen the old Hova capital, Tananarivo (tä-nä-nä-rē'vō), which is almost in the center of the island, as their seat of government.

We find French custom officials at Tamatave, and learn that there are French soldiers at all the ports, and that

the French have an army to keep the country in order. Many of the soldiers are natives, who evidently feel very important as they march about with guns in their hands. They are dressed in zouave uniforms, and their black skins and bare feet stand out in strange contrast to their bright-colored clothing. They are said to be good soldiers, and we need have no fear in making a journey across Madagascar, by way of the capital, through the lands of the Hovas.

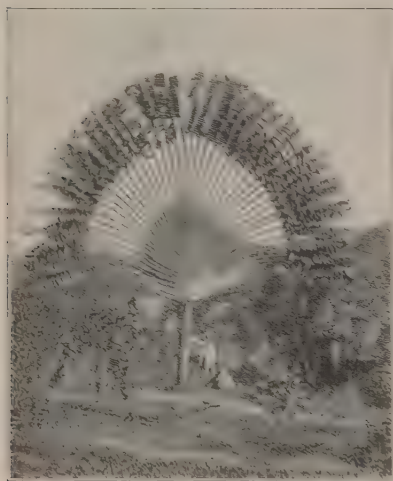


Native soldier.

Tananarivo is only a little more than a hundred miles in a straight line from Tamatave; but the road to it runs some distance along the coast, winding its way up the hills. We go in *pousse-pousse* cars, little carriages not unlike the *jinrikshas* we had at Singapore. Each carriage has three men to help it along, one in the shafts and two pushing behind. We have, in addition, a number of porters carrying our baggage. We start early in the morning, and travel for miles along the edge of the sea, finding the salt air very refreshing.

As we leave Tamatave, we pass men and women coming into the city to market. They all carry umbrellas, and many of them look gay in their bright-colored clothing. There are cocoanut trees here and there along the road, and when we become tired, we sit down and drink the sweet water from the green nuts which our porters get by climbing the trees. Now and then we see other species of

palms, and frequently the traveler's palm. This is a tree like a great open fan. It has long leaves extending out on each side of its lean trunk. The stems of the leaves are hollow where they join the trunk, and they form troughs, as it were, in which the rain water collects in such quantities that one can always have a drink if he finds such a tree. We prefer, however, to quench our



Traveler's palm.

thirst from the water in the cocoanuts and from the many brooks we cross on the way.

We travel rapidly, now and then passing through a village of thatched huts, consisting of one long street shaded by mangoes, palms, and other trees. The huts are made of the traveler's palm. The leaves form the roof, and the walls are of the

leaves sewed to a pole framework. The floor is made of the ribs of the leaves, and it is raised off the ground by a foundation of palm trunks.

The houses are rude. They have but little furniture, and the people usually sit and sleep on the floor. In one corner of each hut is a fireplace, a box filled with sand, with stones so laid upon it that they raise the pans and kettles up over the fire. The water buckets are bamboo logs such as we saw in the Philippines, the ordinary



We stay over night at such villages."

bucket being as big around as a man's arm, and often eight feet in length.

We stay over night at such villages, hiring a hut or so for our party. We sleep on the floor, rolling up our coats for pillows, and spreading our traveling rugs on the rough mats to make our beds softer. Nevertheless, our sleep is not sound. The floors of the huts are several feet from the ground, and the fowls and dogs are kept under the houses. We hear the hens cackling and clucking; and the roosters crow long before morning. There are spiders and lizards crawling about, and we are charged to walk carefully in our bare feet lest we may step on a scorpion or other dangerous insect. The first part of the night the people chatter and sing in the neighboring houses and also outside in the streets. They stay up late, making up for lost sleep by resting at midday.

As we go farther inland and climb the hills to the plateau, we pass through forests. The trees are tall and bound together with creepers and vines. There are many tree ferns and beautiful orchids. The air grows cooler and more bracing as we rise.

We wind about up the hills through valleys covered with rice fields, now crossing a stream, and now climbing places so steep that our human horses ask us to get out of the carriages and walk.

At last we are through the forest and on the plateau. We travel over rolling prairies covered with grass upon which humped cattle are feeding. We pass many small farms where men are plowing with humped oxen, four oxen often being hitched to one plow. We finally come to a hill where we have our first view of Tananarivo, the capital of Madagascar. The city is situated almost a mile above sea level in the heart of this mighty plateau. It is built upon the top and sides of a ridge that is about a mile and a half long, and nearly five hundred feet high. The country is covered with rice fields, with rich pastures upon which cattle are feeding, and with corn and other crops. There are many villages scattered over it, and away off in the distance is Tananarivo on its mighty hill.

We show some money to our *pousse-pousse* men, and tell them to hurry. They go on the trot, running so fast that the perspiration stands out upon their black skins. As we come nearer, the town takes on a reddish tint. Many of its houses are of red brick and red stucco, which give it a rose color under the strong rays of this far southern sun.

At last we reach the edge of the hill and cross the wide drive which has been made about it. We wind our way up through one narrow street after another, finding the city less beautiful at closer view than it was in the distance. Most of the streets are narrow with innumerable alleys crossing them in every direction. Many of the



In Tananarivo.

houses have mud walls about them; there are frequent gulleys, and all together the town looks exceedingly rough.

And still Tananarivo is a great city for this far-away island. It has all together about one hundred thousand people; it has many comfortable two-storied houses with porches and galleries about them, and some fine public buildings. We visit the old palace of the queen, a great stone structure with galleries on all sides of it, and then go to the palace of the French governor general

and several other government buildings. We visit the schools and spend some time in the churches, learning that most of the people are Christians, and that missionaries have long been at work among them.

Friday is the great market day when the natives come in from all parts of the country to buy and sell. We go to the market place at that time. It is filled with strange-looking people among whom are some of the uncivilized blacks, the Baras and Betsileos from the south. The wares are of every description, including beautiful silks and cottons woven in Madagascar, native pottery, and all sorts of food and grains. There are most delicious pineapples, bananas, and oranges, and bushels of peanuts quite as good as those we have at home.

In one part of the market cattle are sold, and in another hides. We learn that hides are among the chief exports of Madagascar, and that some are shipped from here to the United States. We see the queer-looking natives handling the skins, and wonder as we do so whether parts of our shoes may not have scampered over this great plateau on the back of a humped cow like the ones now offered for sale.

The workings of commerce are such that we can hardly tell from what strange parts of the world come the things we eat and wear. In Reunion we saw the vanilla which flavors our ice cream and soda water, in Sumatra we tasted the pepper which seasons our food, and in Australia watched men shearing the wool which may possibly form our clothes for next winter. If this leather under our feet could talk, it might tell tales of the soil we are tramping just now; it might sing a song of a South

American republic, or possibly describe how it covered a tenderloin steak which once galloped over a Texas prairie with a cowboy behind it. If all things about us could talk, we should not need to travel to learn how strange the world is.



41. AMONG THE SAKALAVAS

LEAVING Tananarivo, we make our way in filanzanas across the high plains to the western edge of the plateau, and then wind in and out down the hills to the sea. Toward the end of our journey we are able to take boats on the Betsiboka River, and after a little more than a week from our starting time, we find ourselves in Majunga, the thriving seaport of the northwestern coast.

Our journey has been a hard one, and by no means so pleasant as that through central and eastern Madagascar. On the plateau we had to deal with the Hovas; but here in the west we are among the Sakalavas, a black people with



Sakalava men.

features like negroes, more fierce and less civilized than any of the natives we have yet seen. Some of the men



Sakalava woman.

have ornaments on their foreheads. They wear white cloths about their dark forms, and their woolly hair is done up in little braids, so that were it not for their beards we might think them women. The women also have curious ways of dressing their hair, some twisting it so that it stands out in great round tassels on all sides of the head. Both sexes are fond of jewelry, and wear all they can get.

The Sakalava villages are ruder than those of the Hovas. Some of them have walls about them with great fences of cactus outside, and heavy gates which can be closed at night or in times of attack by hostile tribes. Many of the houses are mean huts of mud bricks. There are pigs everywhere, and we are troubled with mosquitoes and all sorts of vermin. On our way we pass large herds of cattle. Many of the Sakalavas are farmers and stock breeders, and a man's wealth is estimated by the number of cattle he owns.

We go through a belt of forest on our way down from the plateau, and at night hear the lemurs howling in the woods. The lemur is found in most parts of Madagascar. It is a sort of half ape with a long tail, enormous hands, and a head not unlike that of a cat. There are tame

lemurs kept as pets in some of the villages. The animals make us think of foxes or monkeys, and they are supposed to belong to the monkey tribe. Some lemurs are white and black, some have white fur rings about their black tails, and some have a fringe of long hair around the face like a ruff. They are a night animal, prowling about through the darkness and often howling in concert like cats. They are rather timid, and will not attack man unless brought to bay.



42. ZANZIBAR AND OTHER EAST AFRICAN ISLANDS

OUR trip from Majunga to Zanzibar is made in a French trading vessel bound there for a cargo of ivory. We first sail north, passing the Comoro Islands, belonging to France, noted for their sugar and vanilla plantations, and then turning west go northward not far from the African shore, and skirt the lower side of the island of Zanzibar, finally coming to anchor in front of its capital, Zanzibar City, about midway up the west coast.

The island of Zanzibar is about fifty miles long, and so narrow that one could walk across it in less than a day. It is just about equally distant from the Suez Canal, India, and the Cape of Good Hope, and it is only thirty miles from Africa, having a favorable situation for a great trading place. Just opposite on the mainland is the town of Bagamoyo, whence caravans start out for different parts of Africa, and where vast quantities of native products,

including ivory, are brought for shipment to Europe by way of Zanzibar. Zanzibar City is about the largest town on the African coast, if we except Alexandria and Tunis on the Mediterranean Sea. It has about one hundred thousand people, and, though ruled by a sultan, it is under the protection of Great Britain, which also governs the rich little island of Pemba just north of it, and Sokotra still farther north.

In the harbor we find numerous ships, and also many native boats which are engaged in carrying goods and passengers between Zanzibar and the mainland. We go ashore and take one of the black-faced guides with us for a stroll through the streets. Many of the buildings are white, made of brick or stone covered with stucco. Some have roofs of galvanized iron. In the suburbs are many thatched huts, the homes of the poor.

The streets are very narrow, and the only ways of getting about are on foot, in chairs carried by men, or on ponies. We go on foot, pushing along in and out of a motley crowd of people from all parts of the world, and especially from Africa. There are black-skinned men from the mainland doing all sorts of work, and black boys who stare at us as we ride by. There are Arabs in turbans and gowns, yellow Parsees with high hats, and brown-skinned Hindus who have come here to trade. Parts of the city given up to the Hindu shops make us think of Ceylon, and the market with its great throng of blacks reminds us of Tananarivo.

We call upon the sultan at his palace, and then spend some time in going from one store to another buying curios from Africa to show to our friends. We take

carriages and drive out into the country under the shadow of sago and cocoanut palms and other tropical trees, stopping now and then to eat oranges and pineapples, or to have a drink of cocoanut milk. We see many clove orchards which look not unlike those of the Moluccas, and bite into one of the flowers to see if the green cloves are as hot as the dried.

Coming back to the city, we find men loading steamers with cloves and also bales and boxes of copra from the islands about. Others are shipping tusks of ivory brought in by the caravans from interior Africa and sent across the channel for export to Europe.

The tusks are just as they were when torn out of the heads of the elephants, only rough, dirty, and battered by their long voyage out to the coast. Some are eight or ten feet long, and at the root as big around as our heads. They are hollow far up from the roots, but nevertheless are so heavy that we try in vain to lift one. They are sold by weight, and a single tusk will often bring as much as five hundred dollars. Most of the ivory is taken to Antwerp and Liverpool, and thence sent to factories where it is made into knife handles, buttons, and various ornamental articles.

Zanzibar is a regular port of call for steamers going to the Cape of Good Hope from Europe via the Suez Canal. We might take ship for the north, visiting Pemba and Sokotra. They are, however, of but little importance, so we decide to sail south to Cape Town and thence to the islands off the western coast of Africa.

Our steamer calls at Mozambique on the way. This island is close to the African shore, and is important only

through its connection with the large provinces on the continent belonging to the Portuguese. The little island is covered with houses, most of the buildings being old and quaint. It gets all its supplies from the mainland by boats which move back and forth. It has only eight thousand people upon it, although it is the seat of government for more than a million natives who live across the channel in Africa. The people are mostly Africans and Asiatics, with a few Portuguese. Our vessel stays but a few hours, and then goes on to the Cape of Good Hope.



43. WEST AFRICAN ISLANDS — ST. HELENA

THERE are four principal groups of islands lying off the west coast of Africa, all opposite the upper half of the continent. The first are the Azores (*ä-zōrz'*), far west of the Strait of Gibraltar; next are the Madeira (*mā-dē'rá*) Islands to the southward nearer the continent, and still farther south the Canary and Cape Verde archipelagoes.

West of the southern half of Africa are only scattering islets; the chief of which are several belonging to Spain and Portugal in the Gulf of Guinea, and Ascension, St. Helena, and Tristan da Cunha far out from the coast belonging to Great Britain. The chief of the islands in the Gulf of Guinea is Fernando Po, a possession of Spain which lies just opposite the German colony of the Kameruns. It is peopled by negroes. Its commerce is small, its climate is unhealthful, and, as it is far out of our course, we shall not explore it.

Tristan da Cunha, Ascension, and St. Helena are of no commercial importance; nevertheless, we want to stop at the last-mentioned island. Why? Because it was for several years the prison cage of Napoleon Bonaparte, the famous emperor of the French. He had at one time almost conquered Europe, but was defeated and banished to the little island of Elba in the Mediterranean Sea. After being there a short time he escaped, and, crossing to France, raised another army and fought the allied forces of Europe at the battle of Waterloo. Napoleon came near winning in that battle, but he was finally defeated and again taken prisoner. The English, who had most to do with his defeat, decided that they would take no more risks with him so near



Napoleon's house, St. Helena.

Europe, so they carried him away south of the Equator to this rocky island thousands of miles from his dear Paris, twelve hundred miles from the coast of Africa, and eight hundred and twenty miles from Ascension, the nearest land. They stationed soldiers on the island to guard him, and although he was given a house and all comforts, he was kept under guard until he died. His remains were first buried on St. Helena, but they were afterward removed to Paris and there placed in a magnificent tomb.

In going north we call at St. Helena, entering the harbor of Jamestown. We climb up Ladder Hill at the back of

the town, and over Rupert Hill to Longwood, where Napoleon lived. We next visit the Valley of the Tomb where he was buried, and then return to our ship. St. Helena is a volcanic island, rough and ragged. It has but few people and is important only as a stopping place for some of the ships which sail between England and the Cape of Good Hope.



44. THE CAPE VERDE AND CANARY ARCHIPELAGOES

STEAMING northward we touch at the island of Ascension, noted for its enormous green turtles, some of which weigh as much as a good-sized Jersey cow, and then go on north to the Cape Verde Islands, situated about several hundred miles west of Cape Verde, Africa, from which they are named.

The Cape Verde Islands were discovered and colonized by the Portuguese in the middle of the fifteenth century, and they still belong to them. They are nine or ten in number, but their total area is not much greater than the area of Rhode Island. They are of volcanic origin, most of them being made up of high mountains covered with lava. Some of the islands are all rock; others have patches of rice, corn, and tobacco; cotton and indigo grow wild in the woods.

Our ship stops at St. Vincent, coming to anchor in a little bay half surrounded by volcanic hills. How dry and dreary it is! There is not a blade of grass to be seen, and the brown lava rocks throw back the rays of the sun, making it hotter than ever. St. Vincent has no water, and

its vegetation is so scanty that it would not support a rabbit, much less a man. Still it is the most important of all these islands, and we see why when we notice the many ships in the harbor taking on coal. St. Vincent is a great coaling station on the ocean highway to South Africa. Those sheds on the wharves are filled with coal from Cardiff, Wales, and that town back of them is occupied chiefly in furnishing coal and other supplies to the steamers. There are gangs of negroes at work coaling the ships, and we can hear the great lumps as they rattle down into the hold of our ship.

We next stop at the Canary Islands, opposite Morocco. The nearest is only sixty-five miles from the mainland, and they lie right in the track of ships going from Europe to South Africa.

The Canaries are volcanic islands, rising steeply out of the deep waters of the ocean. There are only about seven of them large enough to be consid-

ered important and many smaller ones. They were discovered by an Italian from Genoa, the same city from which Columbus came, about two hundred years before the latter discovered America. They afterward became the property of Spain, and are now ruled as one of the provinces of that country. The original inhabitants were Africans, but they have long since disappeared, and now almost all the people are Spaniards.



Canary Island farmer.

The islands have but a small area, in all not much more than two thirds that of Porto Rico, and their population is but a few hundred thousand. They are very beautiful, and their climate is so mild that many people from England and other parts of Europe visit them during the winter.

One of the most striking features of the Canaries is Mount Teneriffe, whose snow-white peak more than two



"One of the most striking features of the Canaries is Mount Teneriffe."

miles above the sea is visible long before we reach the islands themselves. It is on Teneriffe, one of the chief islands of the group, that we make our first landing, anchoring at the city of Santa Cruz, the capital of the archipelago.

We seem to be in one of the cities of old Spain. The houses are of brick and stone covered with stucco, painted yellow, blue, and other bright colors. They are close to

the streets, and some of them surround patios or courtyards, the garden often being in the center of the house, with rooms all around it. Some buildings have towers on their roofs, where the people sit in the evening enjoying the view. We stroll about the narrow streets, spelling out the signs over the stores, and take a drive out through the suburbs past the great walled ring used for bull fighting.

The Canaries are noted for their wines and fruits. We drive over roads lined with vineyards and orange orchards, the rich yellow balls peeping at us out of the trees. We stop at one place and buy a dozen ripe, juicy oranges for a sum equal to ten cents of our money. They are more delicious than any we have tasted at home, as they come fresh from the trees.

Riding back we go along hills dotted with fine residences, gardens, and fields of rich crops. The roads are lined with cacti, geraniums, and roses, and we now and then see a patch of nopal plants, a kind of cactus which is grown to feed an odd little insect which furnishes one of the dyestuffs of commerce. Have you ever heard of cochineal? It is a dye of the most brilliant crimson, which may be changed by chemicals to orange, red, and bright scarlet. The dyestuff is made from the dead bodies of the cochineal insects which feed on this plant. When the plants are a year old, some of the little insects are placed upon them. They lay their eggs, and in a short time the leaves are covered with tiny white specks, which if touched leave a bright crimson stain. The insects keep on growing until they cover the plants with what seems to be a white mold. Soon after this they are scraped off, put into boiling water, and dried in ovens

or on hot plates. When dried, they look much like grains of buckwheat, and are then ready to be shipped to dye factories all over the world.

Returning to Santa Cruz, we take a little steamer which makes a tour of the islands, spending a day at Las Palmas, the capital of the Grand Canary from which the archipelago gets its name. The island is famous for the canary birds which originally came from here and which are often found wild. We take donkeys and ride about through the country, enjoying the people, who are very polite. The moment we enter a home our host tells us the house is ours, and if we admire anything, he at once asks us to accept it as a present, knowing very well that we shall refuse.

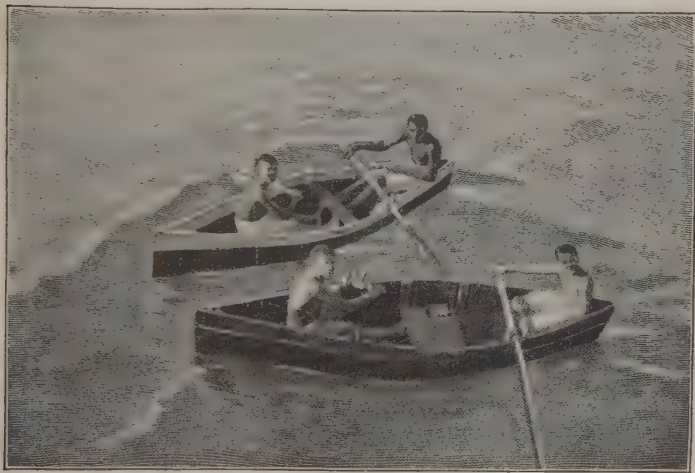


45. THE MADEIRAS AND THE AZORES

LAS PALMAS has frequent ships to the Madeiras, and we have no trouble in getting a vessel which takes us northward to Funchal, the capital on the island of Madeira, the chief of the group. As we come into its harbor, we seem to be entering a vast amphitheater, walled with hills, dotted with villas, and terraced with gardens, orchards, and vineyards.

Many little boats, manned by half-naked boys, put out for our steamer as we come in, and the little ones ask us to throw money into the water and let them dive for it. We do so, and they leap from their boats into the sea, following the coins to the bottom, and coming up holding them in their hands or teeth. They gasp for breath a moment or two, and then call out for more.

As the anchor drops, peddlers swarm on the boat, offering filigree jewelry, embroideries, flowers made of feathers, and delicious oranges, bananas, lemons, pineapples, and pears. The people have white skins, and they are dressed not unlike Europeans. They are Portuguese, the islands being a province of Portugal which owns them by right of discovery and colonization.



"Little boats, manned by half-naked boys."

Going ashore, we walk up the cobblestone street to the hotel, and later go out into the country. Much of our travel is upon sledges drawn by bullocks. The roads are paved with smooth cobbles, and the sleds, which have greased runners, glide easily over them. Each team has a boy who goes along in front, and a man who walks behind, jabbing the animals with a goad to make them go faster. Coming down the hills the bullocks are sometimes taken out, and the runners shoot along as though over snow.

Imagine sliding down hill in the most beautiful May or June weather, eating oranges as you go; that is one of our experiences in Madeira.

Funchal is like a city of Portugal. Its better houses are two, three, and sometimes more stories high. The windows along the streets are barred like a prison, and those above



Sliding down hill in summer.

have little balconies where the people sit in the evening, chatting and enjoying the air. The streets are narrow, and the cobblestones are hard to our feet. People from all parts of Europe come here for their health. The Madeiras have about the finest climate of the world. They are also famous for their wines and fruits.

The same is true of the Azores or Hawk Islands, which we visit before going east to the Mediterranean Sea. This archipelago is a little volcanic group of nine inhabited islands, having less land than a single county of some of our far western states, but a soil so good for oranges, pineapples, and grapes that it supplies Europe with its finest tropical fruits. There are forty steamers kept busy carrying oranges and pineapples from the Azores to the continent, and in one year as many as fifty million oranges have been shipped to England alone.

The resin of a curious tree, called the dragon tree, is also an article of export.

The Azores are about as far from Africa as Pittsburg is distant from the Mississippi River, and they are almost as far away from Portugal, to which country they belong. They rise abruptly out of the ocean, having been forced up by volcanic eruption. Some of them are little more than volcanoes, and one has a crater so low that the water has rushed in and formed a great lake into which boats go through a break in the brim. Others of the volcanoes are high, Mount Pico, the highest of them, being more than eight thousand feet above the sea.

Our steamer from Madeira carries us over sunny seas. There is a whale spouting at the right of the ship, and nearer us a school of flying fish skimming over the waves. Look! One has jumped high up and fallen on the deck of our steamer. It is like a small mackerel, but it has winglike fins on the forward part of its body, each as long as one's hand.

We see Mount Pico before we come in sight of the rest of the Azores; they appear a little later, and at the same time the sweet smell of orange blossoms is borne to us on the breeze. As we approach the land, we can see orchards on the hill with windmills waving their arms above them, and below the scattering white villages of the shore.

We land at Ponta Delgada, the chief city of the archipelago, on the island of San Miguel (sän mē-gě'l'), the largest of the group, and make our way up the street to the hotel. What a curious city! The buildings are of all the colors of the rainbow. The houses and stores are painted rose

pink, sky blue, and bright yellow. There are many white houses, red houses, and houses of brown, gray, and purple. The buildings are close to the sidewalks. They have roofs of red tiles, and the whole city is a patchwork with as many colors as Joseph's coat.

The natives are Portuguese, not unlike those of Madeira, although their dress is very different. The better class women wear hoods of blue broadcloth, for all the world like gigantic sunbonnets with capes which reach almost to the feet. Some of the men wear high hats of blue cloth, and they have large capes over their shoulders. The poorer women have shawls or handkerchiefs about their heads, and their dresses are as bright colored as the walls of their houses.

We take donkeys and ride about through the towns. Donkeys are used for all sorts of work. They carry great loads on their backs, they haul carts, and are also the chief riding animals. Each of us has a donkey boy who runs along behind with a long stick or goad in his hand, beating the animal when he slackens his pace.

We find the farming rude in the extreme, but the soil is so rich that the islands are of some commercial importance.



46. THE BALEARIC ISLES

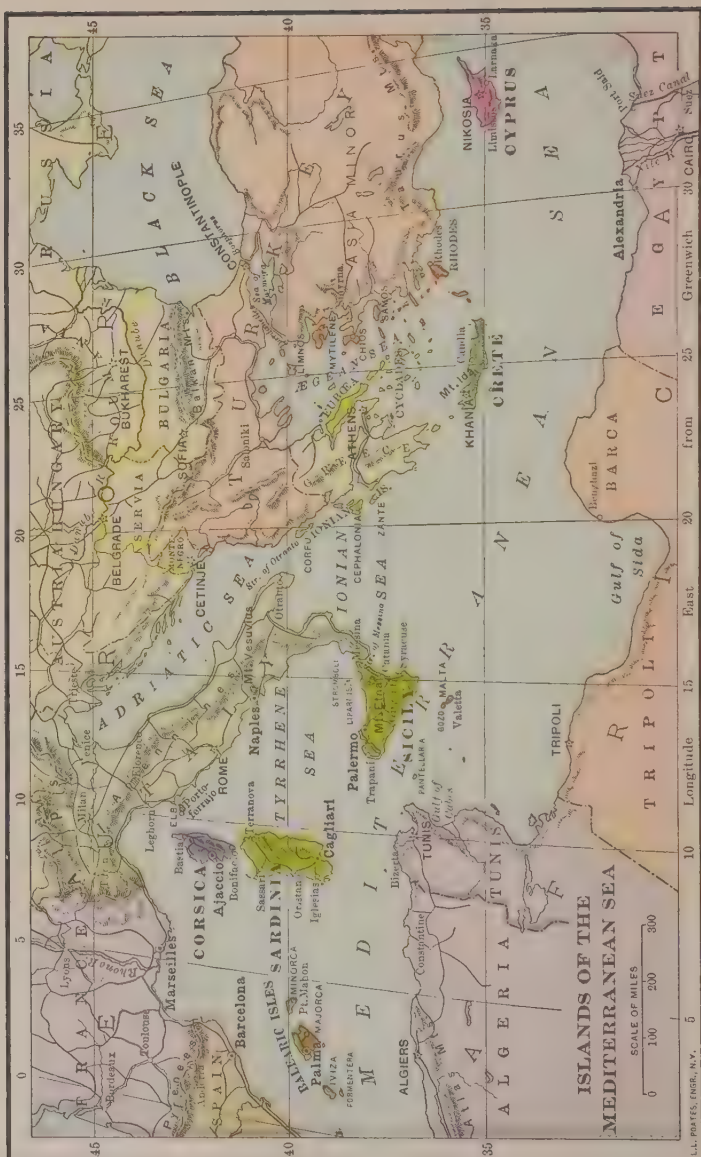
WE have left the Azores and are passing through the Strait of Gibraltar into the Mediterranean Sea. That great yellow rock on the left, with the guns frowning out of its fortifications, is Gibraltar. It belongs to the English, and is a part of the continent of Europe. The

ragged, rocky mountains on our right are in Morocco, on the continent of Africa. The sea in front of us reaches on and on for more than two thousand miles, separating these continents, forming the highways of travel between them.

How bright the sun is, and how beautiful and blue is the water! It is rippling under the wind, and thousands of black porpoises are leaping and racing at the front, back, and sides of our vessel. They stay with us for hours. We move slowly eastward, and then, turning north, call at the Balearic (băl-ē-ă'r'ik) Islands belonging to Spain.

The Balearic Archipelago consists of four principal islands and several smaller ones, formed by the highest parts of a subterranean ridge which here extends far out from the continent. The islands, all told, have an area not much greater than half that of Porto Rico. The first two we pass are Formentera (for-men-tă'ră) and Iviza (ē-vē'thă). They are small and low, but are covered with orchards and vineyards. Farther on is Majorca, the largest of the group, about the size of Rhode Island, and farther still, Minorca, which is next in size. Both are rugged and mountainous, and both are of importance to trade, although not so much so now as in the past.

The Balearic Isles were famous in the days of old Rome. They were noted for their slingers, and one Roman general had to put skins over his boats to protect his men from missiles thrown by the natives. During the Middle Ages these islands were among the chief markets of Europe. They traded with France, Spain, Italy, and Africa; and ships from Asia, loaded with goods brought by caravans from the interior, came across the Mediter-



anean Sea to Majorca, and there transferred their freight to other vessels bound for the European countries near by. When the Cape of Good Hope was discovered, Asiatic products were sent south around Africa, and the islands lost this trade. They are now chiefly dependent upon the coasts nearest them. They export oil, almonds, oranges, lemons, and capers to Marseilles, and wine, pigs, and vegetables to Barcelona, and also to Algiers and Italy.

Our first stopping place is in the beautiful harbor of Palma, the capital of the archipelago. It is a Spanish city of more than sixty thousand people, lying right on the sea, and extending up the hills at the back. Not far from the shore is a great cathedral built centuries ago, and on the hills above we can see windmills which remind us of Holland. Here and there palm trees are waving over the houses.

The streets are narrow, and the houses not unlike those of Madeira. The people are polite, and we enjoy their quaint costumes, which resemble those of the peasants of some parts of Spain.

We gallop on donkeys out into the country through roads lined with thorny cochineal plants and other cacti. There are many orange trees, gnarly olive orchards, smooth-leaved fig trees, and also pomegranates.

Much of Majorca is kept like a garden. The soil is as rich as that of California; single orange trees have produced more than two thousand oranges in one season, and grapes grow in such luxuriance that one bunch would furnish a lunch for a class of schoolboys. There are also apples, cherries, and peaches, and indeed almost every kind of fruit.

47. CORSICA AND ELBA

AFTER leaving Palma, we sail on to Port Mahon in Minorca and there take a ship for Ajaccio (à-yät' chō) on the French island of Corsica. Ajaccio is the capital of Corsica, and is especially noted because it is the town in which Napoleon was born. The city has several statues

to its great hero, and many of its people can explain just why Napoleon lost the battle of Waterloo, and are sure that if he had been feeling well that day, he would have been victorious.

The Corsicans are a nation of fighters. Their little island is rugged and mountain-



Napoleon's house, Ajaccio.

ous and not very rich, but they are proud of their courage and would, it is said, much rather fight than farm. We see children playing soldiers in the streets, and notice that the people are rather sober and serious. Most of the women dress in black, and the men are grave and reserved.

Although Corsica belongs to France, its people look more like Italians than Frenchmen. They speak Italian and were for many centuries governed from Italy. In 1768 the island was given over to France and it is now ruled as a department or province of that country.

Corsica is beautiful. Its mountainous character can be seen far out at sea. There are hills about the harbor of Ajaccio and back of them well-wooded mountains, some of which are snow capped at this time of the year. Some of the valleys have excellent crops; there are many vineyards and fine groves of olives and oranges.

After a stroll about Ajaccio we take the train for Bastia, the leading city on the north coast of Corsica, where we find a steamer which lands us in Elba.

We have now seen where Napoleon was born, and where he spent his last days and was buried. This little island of Elba is another spot connected with his career. When he was first defeated by the forces of Europe and compelled to give up the French throne, he was allowed to retain the title of Emperor, and told he could have this little island of Elba as his empire. He was brought here and given a sum of money eight times as much as the salary of our President to support himself and his court. He came here May 4, 1814, but the next February secretly left for France, where he raised another army and marched against his enemies, who finally defeated him at the battle of Waterloo.

Elba now belongs to Italy, being governed as a part of the province nearest it on the mainland. It is only about as large as the District of Columbia, and it has but a few thousand people. The surface of the island is mountainous. There are extensive iron mines, the ore of which is so fine that it is exported to the United States and England for making Bessemer steel. We spend a few hours at Portoferraio (pōr'tō-fēr-rä'yō), the principal city, and then sail southward for the island of Sardinia.

48. SARDINIA AND SICILY

THE two largest of the Mediterranean islands belong to Italy. They are Sardinia, south of Corsica, larger than Rhode Island and Massachusetts combined, and Sicily, at the toe of the Italian boot, which is much larger still. Both islands are rugged and mountainous, both have rich valleys and plains, and both are inhabited by people of the same race as the Italians. Sicily is the richer and more important; but Sardinia lies right on our route, and we visit it first.

Leaving Elba, we sail southward along the coast of Corsica, and then skirt the eastern shores of Sardinia until we reach the end of the island and enter the port of Cagliari (käl'yà-rē), its capital.

We are in sight of mountains all the way. They are heavily wooded and capped with fleecy white clouds. Some of the peaks are more than a mile high, and parts of the shore are rugged in the extreme. Our little steamer goes lazily along, and we lean over the rail, watching the land with our field glasses. We can make out the olive orchards and vineyards of the foothills, and are told that the woods higher up contain cork trees, chestnuts, oaks, and pines.

Coming into Cagliari Bay, we are in an amphitheater of which the sea is the floor, and the hills, covered with buildings forming the city, are the encircling tiers. There are many boats and ships in the harbor, for Cagliari is the center of the life and trade of the island. It is a town of about fifty thousand people, with narrow streets which we have to climb to get from one place to another.

We land, and make our way about through the city. The sidewalks are crowded. All sorts of work goes on in the open air. Here a cobbler is mending boots right out on the street. A little farther on a tailor is sewing, while down in that alley you may see a girl washing clothes. There are many peddlers showing their wares, rosy-cheeked children play about in the dirt, and donkeys, dogs, and goats wind their way in and out through the crowd. The people are dark faced, with rosy cheeks. Both men and women wear bright colors, and all together the scene is a gay one.

The better parts of the town are more open. There are many churches, and we frequently see priests and nuns in black or white gowns going about from one church to another.

The island of Sardinia is well known in history. The Phoenicians and Carthaginians had settlements upon it, and it was once called the granary of the Romans. Some parts of it are still fertile, but its lowlands are unhealthful and malarial, and it is of no great importance in the commerce of the Mediterranean.

It is different with Sicily, which we are now about to visit. That island produces about one third of the wine of Italy, half the barley, a large part of the wheat, and nine tenths of the fruit. It might be called Italy's farm and market garden, and it is so situated that it is one of the chief commercial centers of this part of the world.

It is but a short ride by sea from Cagliari to Palermo, the capital. We enter a fine bay guarded by two rugged mountains, and come to anchor in front of the plain in which the city lies. The plain is called La Conca d'Oro,

or the shell of gold, because of its fertile soil and its vast orchards of oranges, lemons, and other fruits.

Palermo lies right on the bay under the shadow of the mountains. It is a magnificent town, as large as Washington, with wide streets and many fine buildings.



Mount Etna.

We spend some time in wandering about it, and then take a train for other parts of the island. We visit Messina, a thriving seaport on the northeastern coast just opposite Italy and near the strait through which the ships go from Genoa and Naples on their way to Egypt and the Indian Ocean.

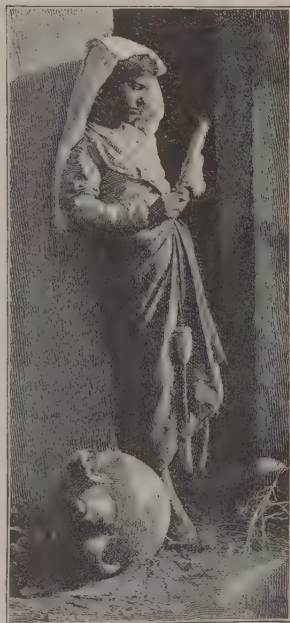
We stop at Catania at the foot of Mount Etna and ride some distance up the mountain, although not to the top. We are now on the highest volcano in Europe. Mount Etna rises far above Vesuvius, and as we look at it, we see that

it is covered with snow. The mountain is now smoking, although not in actual eruption, as it has been at many times in the past. In 1892 it burst forth, throwing out a deluge of hot lava, ashes, and rocks which covered the farms, vineyards, and villages in its course.

Much of our time in Sicily is spent in traveling about through the country. The island is a beautiful one, and every step brings a new and strange picture. The land is divided up into large estates, which are rented out to peasants who labor under overseers or perhaps on shares.

The peasants live in villages and go out to their work. Their houses are rude, usually built of stone or brick covered with plaster. The people live chiefly on wheat, dried olives, green fruits, and sour cheese, with now and then a bit of pork or goat's flesh. We see goats everywhere. In the cities they are driven from house to house and milked while the customers wait.

Do you know what sulphur is? If you do not, you can learn something about it by striking a match or by getting a bit of it at the drug store and lighting it. It is a hard, brittle, yellow substance, which gives forth a pale blue flame, the fumes of which will make you cough and almost



Sicilian girl.

suffocate you. It is of value in making matches, gunpowder, and medicines, and in many kinds of manufactures.

We saw some sulphur in the volcanoes we visited during our tour of the Pacific. There are also sulphur mines here and there in the earth. Mount Etna sometimes vomits forth sulphur mixed with its lava, but the chief supplies of Sicilian sulphur come from sulphur mines far away from the volcano. The sulphur lies in veins in the earth. It is dug out by men and boys, just as our people mine coal. The ore is carried to the surface, and then smelted or otherwise treated to remove the impurities, after which it is shipped to different parts of the world.



49. MALTA AND THE GRECIAN ISLES

A FEW hours by steamer from Sicily bring us to Malta, a rocky little island with smaller islands about it, belonging to Great Britain. Malta itself is only nine miles wide and twenty miles long, but it is valuable because of its excellent harbor at Valetta, and because it lies almost midway on the route from the Strait of Gibraltar through the Mediterranean Sea to the Suez Canal.

As we see the island from our steamer, it appears to be without vegetation. The fields are inclosed in stone walls, the hills are terraced with stones, and it is only where the orange, lemon, and olive trees stand out above the walls that green is to be seen.

There are many ships at the wharves of Valetta; and we make our way through a crowd of Italians, English, Turks, Greeks, and sailors from everywhere, up the steep

streets to the main part of the city. We go along the Strada Reale, the best business street, looking at the beautiful Maltese lace in the show windows, and at the silver filigree work which might almost be called lace in silver.

We take donkeys and ride out to spend a day with the peasants. They have small farms surrounded by stone walls which prevent the land from washing away, and also serve to keep out the robbers.

They live in little houses built of stone, with flat roofs and rough doors and windows. They cook upon charcoal brasiers, and their food is scanty and plain. The peasants seldom have meat; they live mainly on brown bread, macaroni, olive oil, and goat's-milk cheese, and sometimes fish and fruit. They go to work early, but rest a couple of hours in the middle of the day, and always take a nap after dinner.



"They live in little houses built of stone."

The people are everywhere busy, but they are generally ready to stop and chat with us through our interpreter. The men are in their shirt sleeves; they wear trousers of coarse blue cotton, and most of them are barefooted. The women dress just as simply, having coarse dresses with hoodlike mantles which reach to the waist.

Our donkeys are excellent, and they trot as fast as ponies. The air from the sea is fresh and cool, and we enjoy ourselves as we ride from one little farm to another, now stopping to eat the blood-red oranges common to Malta, and now drinking a glass of warm milk fresh from the goat.

Malta is noted for its goats. They are excellent milking animals, some giving as much as a quart daily. Every morning the goats are brought from the country into the towns and milked at the doors of the customers.

From Valetta we take ship for the Ionian Islands, off the western and southern coasts of Greece, calling first at Zante, not far from the entrance to the Gulf of Corinth.

The Ionian Islands are many in number, and seven of them are of some importance. They have all together an area not much larger than the area of Rhode Island, and their population is little more than two hundred thousand. Only one third of them are Greeks, the others being Jews and people of the mixed races from the countries about.

The skies of Greece are wonderfully clear, the climate is delightful, and the soil is so fertile that oranges, lemons, grapes, and other kinds of fruits grow luxuriantly. Upon the island of Zante there are great vineyards devoted to Zante currants, a seedless grape which is dried and shipped all over the world. It is sold in almost every grocery store, and we have often eaten it in cakes and plum puddings.

From Zante we go north to Corfu, an island noted for its beauty, and then move around the southern coast of Greece to the archipelago in the Ægean Sea.

This archipelago consists of many small volcanic islands,

of which some are little more than rocks of white marble; some are almost barren, and others have olive orchards and vineyards built in terraces on the sides of the hills. The people live in little flat-roofed houses painted white. They are mostly Greeks, or of the mixed race found in this region, many of them being sailors and fishermen. Some of these islands belong to Turkey, having a population more or less Mohammedan, while those nearest Greece are inhabited chiefly by Christians of the Greek Catholic Church.



50. CRETE, RHODES, AND CYPRUS

COASTING southward, we call at Crete, over which Turkey claims a limited authority; but Crete is practically an independent state, which is now governed by the crown prince of Greece. It is a long, narrow island, with a chain of mountains running through its middle, Mount Ida, in the center, being two thousand feet higher than Mount Washington.

The mountains of Crete have numerous caves, including one on the slope of Mount Ida in which the ancient Greeks supposed the Minotaur lived. This was a terrible monster with a human body and the head of a bull, which, according to tradition, ate nothing but human flesh. Every year, so the story goes, the king of Crete compelled Athens to send seven boys and seven girls to be fed to this monster, and this continued until a brave young prince, named Theseus, came here and fought the Minotaur and cut off his head.

We call at the town of Candia, on the northern coast.

The people are much like those we saw in the Grecian islands. They have oval faces, pointed chins, and dark, rosy cheeks. Many of the men wear white shirts, blue waistcoats, and long boots, with their trousers gathered in at the knees. Some have red fez caps, and others wear hoods. The chief business of Crete is farming and fruit raising, the principal products being olives, oranges, lemons, and wines.

Leaving Candia, we next call at Rhodes, where we get a ship which takes us to Cyprus, at the eastern end of the Mediterranean Sea. Rhodes has been a very important island in the past, and it was once a great commercial center, having trade with Egypt, Asia Minor, Greece, and other parts of Europe. Its capital, the famous city of Rhodes, at its northern end, was in ancient times one of the finest cities of the world, noted for its schools and culture.

To-day the island belongs to Turkey. It is governed by a pasha, and is comparatively poor. The great city of the past has disappeared, and in its place is a town of about thirty thousand people, made up of Greeks, Turks, Armenians, and Jews. The island is mountainous, with many well-watered valleys. It produces wine, wax, honey, lemons, oranges, and figs, and has some manufactures of silks.

It was upon Rhodes that the famed Colossus stood. This was a statue as high as a country church steeple, put up to the god of the sun, in honor of the successful defense of Rhodes, about three hundred years before Christ. The people erected it at the entrance of the port, so that it was seen by ships coming in, just as the great Statue of Liberty is seen in the harbor of New York.

They were years in building it, and when completed it was considered one of the seven wonders of the world. It was finally destroyed by an earthquake about 224 B.C., and its fragments lay where they fell for almost one thousand years.

Cyprus is the third largest island of the Mediterranean. As we near it from Rhodes, it looks like two islands, for it has two mountain ranges running along its north and south coasts, with a large plain between them. As we get nearer, the mountains seem to grow in size, and the real shape of the island becomes more apparent. We steam around the southern side, calling first at Limissos and then at Larnaka, the chief port, with a very poor harbor.

We land, and make our way through the town, and then take horses and ride across country to Nikosia, the capital. We pass many little fields of wheat and barley on our way. Now and then we see a cotton plantation, and up on the hills olive orchards and vineyards. Farming is the chief business of Cyprus; although the country is very rough, and there is much waste land.

Cyprus now belongs to Great Britain, being governed by a high commissioner appointed by the king of England. The island is noted for its antiquities; and many statues, vases, and other curiosities used ages ago have been dug out of the ground and sent to museums all over the world. The people are mainly of the Greek race, and most of them belong to the Greek Catholic Church, although some few are Mohammedans. There are many schools, including high schools, and several newspapers are published in Greek. The people elect many of their own officers and fix their own taxes.

51. THE WEST INDIES—GENERAL VIEW

WE have crossed the Mediterranean Sea, have passed out through the Strait of Gibraltar, and are again steaming over the billowy Atlantic. We are on our way to the West Indies, that mighty archipelago which, beginning about Florida in North America, extends in a great curve to the mouth of the Orinoco River in South America, walling in the Caribbean Sea from the Atlantic Ocean and Gulf of Mexico.

The West Indies are among the most important islands of the globe, and they are especially interesting to us because their people are our next-door neighbors. Porto Rico, one of the larger islands, is an American colony, and we have close political and trade interests with Cuba, the largest and most important island of all.

Let us take a general view of the West Indies before we begin to explore them. They are divided into three principal groups: the Bahamas, off the southeast coast of Florida; the Greater Antilles, comprising Cuba, Jamaica, Haiti, and Porto Rico, with the smaller islands about them, south of the Bahamas; and the Lesser Antilles, which extend from Porto Rico to the mouth of the Orinoco River.

With the exception of the Bahamas, which are low and of coral formation, the most of the archipelago is mountainous, some parts having active volcanoes. The Greater and Lesser Antilles are merely the peaks of a high mountain range, which extends far down into the bed of the ocean. The mountains are covered with forests, the trees

of which include mahogany and dyewoods; the lowlands are largely sugar plantations; all the fruits of the tropics grow in profusion, and the islands are so beautiful that they are often spoken of as "The Gems of the Ocean." The most of them lie in the tropics, but they are in the track of the trade winds, and the highlands are delightfully cool. The archipelago has a rainy season toward the end of the summer, and a dry one from December to April, while in the early fall there are frequent hurricanes.

We all know how the West Indies were discovered. The Bahamas were first seen by Columbus in 1492, and during the same year he also visited Cuba and Haiti. He had no idea of our great hemisphere, but supposed himself near the coast of India or some part of Asia, and therefore called the new islands the West Indies. The Greater Antilles were colonized by the Spaniards, and they at first claimed the whole archipelago. They were not able to hold the islands, however, which gradually passed out of their hands.

Cuba is now independent, Porto Rico is ours, and Haiti is divided into two republics. Jamaica, the Bahamas, and some of the Lesser Antilles belong to the British, and other islands are owned by the French, Dutch, and Danes.

The West Indies are bound together with telegraph cables. Many lines of steamers connect them with one another and with the chief ports of our Atlantic and Gulf coasts, and also with Europe. We shall have no trouble in making our way from one place to another, and shall frequently meet Americans who are doing business in the islands.

52. THE LESSER ANTILLES

OUR first travels through the West Indies shall be in the Lesser Antilles. We are nearing them now. That island at the front over the prow of the ship is Barbados (bär-bā'dōs), belonging to England. It is our first port of call. As we come closer we can see the cocoanut trees lining the shores. We observe that the island is of coral formation, and we sail carefully to avoid the coral reef, through a break in which we enter the harbor of Bridgetown.

The moment our steamer casts anchor it is surrounded by boats filled with negro men and women bringing tropical fruits, shells, and other things for sale. We land, and find ourselves in one of the quaintest towns we have yet seen. The buildings are of coral rock. Many are of two and three stories; some have awnings over the streets, and we can walk from store to store in the shade.

How bright everything is and how dusty! The white coral roads are dazzling under the sun, and we are warned to buy smoked glasses to shield our eyes during our rides over the island.

See the sugar! There are hogsheads and bags of it on the wharves; there are barrels of rum, and the rich smell of molasses fills the air. This little island is one great sugar plantation. It is only about twice as large as the District of Columbia, but it has seventy-five thousand acres of sugar fields, four hundred sugar mills, and a number of distilleries which make rum.

Barbados is as thickly populated as any island we have

visited, and the most of its people are negroes. The streets are filled with blacks and mulattoes, nearly all dressed in white. The men wear white shirts and trousers and white straw hats, and the women white or colored dresses and bright-colored turbans. How straight the women are! There come two with bundles on their heads. It is this way of carrying things that gives them their erect figures.



Street in Bridgetown.

Farther on is a black policeman with a white helmet. There are black soldiers and black merchants, lawyers, and doctors. This is the case with most of the Lesser Antilles and also of Jamaica and Haiti. The blacks were brought as slaves from Africa to work the sugar plantations. They were afterward freed, and they now form an important part of the island population, and on many of the West Indies the most important part. The sugar estates of



Cutting sugar cane.

Barbados are largely owned by colored people, although the island belongs to England and is ruled by a governor sent out from that country.

Leaving Barbados, we sail for Trinidad, stopping at Kingstown, the capital of St. Vincent, and at St. George in Grenada, another English island below. Both Grenada and St. Vincent are volcanic. They have a rich soil and raise all sorts of tropical fruits, including spices and the cacao from which chocolate is made.

Trinidad is the largest of the Lesser Antilles. It is a rectangular island lying so close to the South American continent that we could cross over in a very few hours. It is thickly populated, having about two hundred and fifty thousand inhabitants.

The island is devoted to sugar, and among its people

are eighty-five thousand Hindus who have come here to work on the sugar estates. We see Hindus and Chinese among the blacks and whites at the wharf of Port of Spain, where we land ; the vegetation is like that of Ceylon, and we wonder if we are not off the coast of southern India, instead of off South America.



Port of Spain.

Port of Spain is the capital of Trinidad. It is a well-kept little city with all modern improvements. It has places where we can hire bicycles, and we ride about over the country, visiting the sugar, coffee, and cacao plantations. Now we stop to gather flowers and ferns by the roadside, now to watch the butterflies, which are so beautiful in this part of the world, and again to laugh at the monkeys, which angrily scold at us out of the trees.

Our most interesting trip from Port of Spain is to La Brea, a little peninsula on Trinidad about thirty-six miles away. Upon this peninsula is an asphalt lake, whose

contents have furnished the pavements of many an American city.

We have all heard of asphalt, and many of us have walked or ridden upon it. It is a sort of pitchlike substance, mixed with sand, which melts when heated, but when cold is as hard as stone. This stuff can be spread over a road, making it perfectly smooth. It can be put upon paper or other material and made into roofing, or it can be used for walks and floors.



Lake of pitch.

Near La Brea, in the top of a hill about 130 feet above the sea, there is a lake of such pitch. It is a mile and a half in circumference, and in it there are several million tons of asphalt.

We go to La Brea by sea, smelling the pitch as we near the peninsula. The beach is coated with hard pitch, and

there are grayish black pitch pebbles upon it. We make our way up the black road to the top of the hill, and at last stand on the border of the lake. It looks somewhat like a great sheet of asphalt pavement, dotted with little islands of grass or stunted trees. It has cracks filled with water, and in some places gas is coming out.

We see men on the lake digging pitch, and start across it. At the center our boots sink in almost to our ankles, and we hurry on, fearing we may get fast in the pitch and not be able to pull ourselves out. Nevertheless our feet are comparatively clean. There is so much water and oil in the asphalt that it does not stick. We take up some and wring the water out of it with our hands, and are told we might knead it an hour before it would become sticky.

Vast quantities of this asphalt are shipped away every year, but the stuff gradually rises and fills the places dug out, so that one really does not know how much there is. Near the lake there are places for purifying the asphalt. It is boiled in huge caldrons and then run off into barrels, in which shape it goes to the markets.

Returning to Port of Spain, we are at a loss to know where to go next. We might visit Tobago (tō-bā'gō), a mountainous little island belonging to Great Britain, peopled by negroes, or sail along the northern coast of South America to visit Curaçao (kōō-rā-sō'), belonging to the Dutch, and other little islands of that region. We wish, however, to continue our explorations of the Lesser Antilles, and hence make our way northward to St. Lucia, belonging to Great Britain. We go by the Pitons, two mighty rocks of the shape of gigantic cones two thousand

feet high, and call at Castries (cäs-trē'), the capital. Our steamer goes right up to the wharves, and we watch the ships taking on coal while we wait. The island is volcanic and wild in the extreme. Castries is an excellent coaling station, but otherwise of little importance.

Our next stop is at Martinique, where we land at Fort de France and climb Mont Pelée, the terrible volcano which ruined the town of St. Pierre and a great part of the island a few years ago. The volcano is less than a mile high, but it periodically bursts forth into awful eruptions, which deluge farms and villages, destroying multitudes of people.

Martinique has many fertile valleys, and its appearance is somewhat like that of Tutuila in Samoa. It belongs to France and is governed by that country, although its people are chiefly mulattoes. They look much like the natives of Barbados, save that the women wear dresses of brighter colors and have great hoops in their ears. The products are sugar and cacao, and the fruits of the tropics.

From Martinique we go north to the British island of Dominica, so named because Columbus discovered it on Sunday. It is volcanic and is chiefly noted for its sugar. Farther north still is Guadeloupe (gä-de-lōöp'), an island shaped like an hour glass, belonging to France, and above it the British islands of Montserrat, Antigua, Nevis, and St. Christopher, all small and of little importance. On Nevis, Alexander Hamilton was born. St. Christopher was named by Columbus after his patron saint, but it is more often called St. Kitts, Kitt being the nickname for Christopher. During our stay there we climb Mount Misery,

a half-dead volcano, and afterward visit Brimstone Hill, close to the shore, which looks as though it had been thrown out of the crater.

After leaving St. Kitts we sail in and out among the Danish possessions of St. John, St. Croix (croi'), and St. Thomas, which may sometime belong to the United States, Congress having offered to buy them. They are little volcanic islands discovered by Columbus on his second voyage in 1493. They are southeast of Porto Rico and in the track of vessels running between Europe and Panama and South America. They have all together a population of thirty-two thousand, mostly colored. Their climate is delightful, and as they lie in the track of the trade winds it is never too hot.

Our steamer calls at St. Thomas to coal. The chief value of the island comes from the harbor, which is wide and deep and makes this place an excellent coaling and naval station. The coal is carried to the ships by negro girls, in huge baskets on pads on top of their heads. They are barefooted and barearmed, and they sing as they trot up the gang plank with their baskets of coal.

While waiting we throw coins to the diving boys in the harbor, and then land for a stroll about Charlotte Amalie, as the town is named. It is a pretty place, with narrow, clean streets and well-stocked stores. As we come back to the ship, women peddlers gather about us and offer us fruit and other things for sale. We spend a few cents for some oranges and a couple of pineapples, quenching our thirst with cocoanut water fresh from the shell.

A little later the steamer toots out its warning to leave, and we hurry on board. Our ship sails to the westward.



"We find ourselves in front of San Juan."

We pass the little islands of Vieques (*vē-ā'kās*) and Culebra (*kōō-lā'bra*), belonging to the United States, and in the course of a few hours find ourselves in front of San Juan, the capital of Porto Rico, and under the shadow of the dear old American flag.



53. GENERAL VIEW OF PORTO RICO — A WALK THROUGH SAN JUAN

BEFORE we land on Porto Rico, suppose we take a bird's-eye view of the island. Let us imagine ourselves in a balloon high above it. It lies on the sea, an almost rectangular mass of rolling blue hills, with clouds resting on them, and a light green fringe of low-lands bordering the coast. The land rises in the center, a

mountain ridge running through it from west to east, branching out into two spurs not far from the middle, so that the ridge has the shape of a pitchfork with a short handle and two long tines. There, near where the tines come together, is El Yunque or The Anvil. That mountain is thirty-six hundred feet above the sea, and it is the highest point in Porto Rico.

How rugged the hills are! They slope up in places like walls, making valleys shaped like capital V's, with mountain streams running through them. Descending, we observe that everything is covered with green; the dark shades on the mountains are fields of coffee, tobacco, and bananas, and the pale green of the low coastal plains is the sugar plantations.

Porto Rico looks large to us from our balloon. It is not so in comparison with many of our states. You could put ten such islands into Indiana, and it would take two of them to cover New Jersey. Its average width is only a little greater than the distance from Washington to Baltimore, and its length not much more than from Baltimore to Philadelphia. If Porto Rico were level, we could walk from one end of it to the other in three days, and we could cross it in one.

How thickly the island is settled! We can see houses everywhere through our field glasses. There are villages along the coast and in the valleys, and huts shine out of the trees on the tops of the mountains. There are but few large cities, the most prominent being San Juan on the north coast and Ponce on the south, neither of which has more than fifty thousand inhabitants. Smaller places are Arecibo, Aguadilla, and Mayaguez (mä-yà-gwās') there

on the north and west coast, and Guayama and Humacao (ōō-mā-kā'ō) on the south and east. Nevertheless Porto Rico contains a large population. It has more than a million people. It is more thickly settled than any of the West Indies except Barbados, and than any of our states except Massachusetts and Rhode Island.



A street in San Juan.

But let us come down to earth and take a walk through San Juan. We are on the streets of our Porto Rican capital. How unlike our cities at home! The town is situated on a little island not far from the middle of the north coast and connected with it by bridges. There is a huge wall about the older part of the city and a castle on a hill at one corner, guarding the harbor. There are other large houses, here and there, which belonged to Spain, but are now used by Uncle Sam's officers; and the rest of

the buildings are two and three storied structures, packed close together along narrow streets which cut each other at right angles, with a plaza or square in the center.

The buildings are of brick, covered with stucco painted in the brightest of colors — sky blue, rose pink, brown, red, and yellow. The roofs are of red tiles. There is no window glass, the window openings being covered by heavy green shutters, which by day are thrown back so that you can see all that goes on within. Here a woman is combing her hair; there one is washing; across the street a girl is sewing on a hand sewing machine which rests on her lap, while about her feet two little brown babies are rolling. Many of the houses have balconies extending out over the sidewalk, and in the evening these form the sitting place of the family.

On some streets the ground floors are given up to small stores, which look more like caves than like our mercantile establishments. There are, however, other rooms farther back, the goods on the shelves being merely samples of those kept in the rear. The business signs are Spanish, and the names upon them give no indication of their owners nor of the goods sold within. Here, for instance, is a dry goods store with the words "La Perla," or "The Pearl," above it. Next door is one selling hardware, labeled the "Golden Rooster," while down that side street is a shop called "La Nina," or "The Girl," that sells gentleman's furnishing goods.

What a strange crowd! The streets swarm with people, most of them the descendants of Spaniards who settled the island long ago. We see many mulattoes, and now and then a negro. There are also people from the United

States, and some Spaniards. The most of the natives dress in light clothing. The men wear straw hats and white linen suits, and the women light dresses. The poor are barefooted, and many of the women bareheaded.

How noisy it is! From the second-story windows come the drum of the piano and the twang of the guitar. Hucksters are crying their wares. Goats run in and out of the



"The chief market is held inside a court."

houses, carriages drawn by ponies dash by, and the scenes are as busy as any we have witnessed since we left home.

We make our way on to the market, passing peddlers of every description. Here is one selling chickens. He has three dozen fowls tied together by their legs and slung on each side his shoulder, and he calls out the prices in Spanish. The chickens squawk as he goes. Behind him is a man with bundles of palm bark under his

arms. There are feathers sticking out of the bundles, and, as he turns around, we see that each contains a live turkey laid flat, and thus tied up for sale. Farther on are men selling eggs, and, farther still, ice peddlers and candy peddlers, and a boy carrying a great basket of bread on his head.

The chief market is held inside a court. It has vegetables and tropical fruits, as well as meats and fish of all kinds. One section is devoted to dried beef, which the natives stew and eat with their rice. Another article sold is salt cod, which is used all over the country.

Leaving the market, we pay a visit to some of our Porto Rican cousins in their homes. We have brought letters of introduction, and are heartily welcomed. Our friends are well to do, and we find that they live quite as comfortably as we do in America. They dwell on the second floor of the houses, the ground floor being given up to the servants and stables. We often pass by horses and carriages as we go up the wide stairs to the living apartments.

The rooms above are large and airy; they have great windows opening out upon galleries or balconies, where one can sit in the cool of the evening. Our friends are fond of music, and we hear pianos and organs in almost every home.

Later on we see something of the poorer people, finding many living in one or two rooms. Some families have but one bed, and the children sleep on the floor. Porto Rico was terribly oppressed before the United States took possession of it, and the lower classes, although they are now much better off, are still poor. There are many beggars on the island, and in the cities there is one day

of the week when beggars are permitted to go about asking alms. This is usually Saturday. Then every merchant and business man expects such a call, and prepares a pile of cents for them. The beggars call one by one. Each is supposed to take one cent and no more, and to go away blessing the giver.



Home of a well-to-do Porto Rican.

Before leaving San Juan we call at the palace to see the governor, and then visit the legislature. Porto Rico is now ruled by a governor and an executive council, appointed for a term of four years by the President of the United States, and a House of thirty-five delegates, elected every two years by the people. The local laws are made by the executive council and the delegates; and a part of the executive council is the governor's cabinet, aiding him in carrying out the laws.

Porto Rico has been steadily improving since we took possession of it. New courts have been instituted so that the people have justice. Schools have been established everywhere, and the postal and telegraph systems extended. New roads have been made, and the people are rapidly growing in civilization and wealth.



54. ACROSS PORTO RICO

WE leave San Juan this morning for a trip across Porto Rico. We have automobiles, and we spin along, up hill and down, going as fast or as slow as we please. Now we stop to chat with the people, now to lunch at a village, and now to visit a coffee, tobacco, or sugar plantation.

How delightful it is! The road is as hard as stone and as smooth as a floor. It is the military road built long ago by the Spaniards, and is famous as one of the best roads of the world. It begins at San Juan and crosses the mountains to Ponce (pōn'sā), the chief commercial city of Porto Rico on the Caribbean Sea. Its main line is more than eighty-one miles long, but with its branches it is thirty or forty miles longer.

How the road winds as it goes up the mountains! Now it seems to cling to the sides of a precipice, and we have great walls of green above and below us; now we are climbing the hills, and now coasting with our hands on the brakes down to the valleys. At times we can see the road both above and below us, and it seems impossible that we could ever climb to the top.

The scenery is wonderfully beautiful. We pass through the sugar plantations of the coast, going by cocoanut groves and other strange palms. Now we stop at a field of bananas. The plants are twenty feet high, and their soft green leaves are each as tall as a man. Their blossoms are as large as an ear of pop corn, and those in full bloom are blood red.

As we wait, a man goes by with a mule load of oranges. The animal has two baskets, each holding three bushels, slung over its back. We ask the price of the fruit. The man tells us that the oranges are especially fine, and that he can not possibly sell more than three for a cent. We buy a couple of hundred, each of us storing a dozen or so in his automobile to eat on the way. The oranges are full of juice and deliciously sweet. We eat them after the Porto Rican style, cutting off the yellow outside skin, leaving only the white. We then slice off the top and suck out the juice. It is fit for a king.

Higher still we come into the coffee plantations for which Porto Rico is noted. The trees are in blossom, and the air is loaded with the sweet perfume. Porto Rico raises some of the best coffee of the world, and coffee grows well on all the higher parts of the island. We cut coffee sticks for canes and then fly along through fields of tobacco, stopping to look at the sheds where the leaves are dried and cured for the market. The tobacco fields run up and down the hills. The plants are of a dark green color, with enormous leaves which grow on all sides of the stalk.

As we go on with our ride, the beauties of Porto Rico grow upon us. We have seen most of the islands of the

globe, but there is none more beautiful than this. It is like Switzerland without the ice and snow, and it has many beauties which Switzerland has not. The mountains are green, and clouds rest on their tops. Many peaks are hidden in fleecy white masses, and little white clouds nestle here and there on the slopes. The air is moist, the breeze tempers the rays of the sun, and the heat seems just right.

Now and then we pass through the woods. The trees are those of the tropics, with long green vines or silver-gray moss hanging down from the branches. Some trees have orchids clinging to them, others have masses of red, yellow, or purple blossoms, making them look like enormous bouquets, while others are covered with balls of white wool; the latter are cotton trees, the cotton bursting forth from the bolls just as it does in the plants of our southern states.

And then the ferns! They are of every description, from the exquisite maidenhair close to the ground to the great tree, as high as a two-storied house, with enormous branches as fine as the most delicate lace.

All along the way we meet people traveling or bringing goods down to the ports. Some are on Porto Rican ponies, others in carriages, and others on foot. We go by great carts loaded with tobacco and coffee, and hauled by oxen, from two to twelve being yoked to each cart. The yokes are not fastened about the necks as with us; they rest back of the horns, and are tied there by ropes so that the oxen pull with their horns and heads, and not with their necks and shoulders as at home.

Much freight is carried upon the little ponies, for which the island is noted. We pass several caravans of this

kind, each pony having a pack on its back, and sometimes a man on top of the pack. The man sits with his feet on each side of the pony's neck, and rides almost as comfortably as in a chair.

Many of the hills are covered with grass, and upon some of them fat cattle are feeding. Some fields are fenced with barbed wire, others have hedges of wild pineapples. The leaves of these are so sharp that one can not crawl over them, and the animals will not break through.

There are no farmhouses and barns, such as we have. Now and then we see the home of a planter, a building made of boards with holes in the walls for windows, and stairs reaching from the ground to the first floor. The houses are built high up on posts, and, as in San Juan, the well-to-do people live upstairs. The climate is such that cattle and horses feed out of doors all the year round; it is never cold, and there is always good pasture.

The homes of the poor are to be seen everywhere along the road, and off in the fields. They are little shacks made of boards or palm bark, so mean that they would hardly do for a cow stable at home. Some have a framework of poles to which are tied palm leaves, making the walls and roof. The floors are of poles, and the roof is so thin that the rain often drops through.

We stop at a hut and look in. It has but one room. There are no windows, and the only light comes through the door, which is made of palm leaves, and so hung that it can be lifted aside during the day. The people sleep on the floor. The cooking is done in a little lean-to at the back, upon a fire bed of earth, the pot being raised upon stones above the coals.

The poor people live upon little. Their chief food is bananas, of which it takes many to satisfy hunger. The small children have their stomachs so stretched from such eating that they seem deformed. Such stomachs are sometimes called "banana stomachs."

Our little Porto Rican cousins of the interior are scantily clothed, but they are nice little children, and they laugh



"We stop at a hut and look in."

and wave their hands at us as we pass. They seem to be happy, and we notice that their parents are kind to them, and apparently love them as much as our parents do us.

We go through villages of thatched huts, seeing now and then one which has a few buildings similar to the smaller houses of San Juan. The ordinary village consists of a public square, with a big church facing it, several houses of stucco and wood, and many thatched huts. The houses are built close together. Each has a door, and some holes

for windows, but no glass. We can see in as we go by. There is almost no furniture; in some houses hammocks take the place of beds.

The people stand in the doorways and look at us as we fly by. They are dressed in white or colored cotton. Many of the women are bareheaded, and all are barefooted. Some have naked babies in their arms, and naked children fly out of the streets to escape our automobiles.

Now we are over the mountains and going down the opposite slope. The south side of the island is drier because the trade winds from the north, which bring the rain, first strike the other side of the mountains, and the cold air squeezes out most of the moisture. This is so in all the West Indies, the northern sides being the rainier.

The latter part of our journey is downhill, but the slope is so gentle in places that we raise the brakes and let our machines fly over the road, without using steam to carry them onward.

Farther on we come to the lowlands, and are again in the great belt of sugar cane which almost encircles Porto Rico. The black earth is covered with a rich growth of pale green. We pass many sugar factories, their smokestacks leaning, as it were, against the blue sky, and we see gangs of men at work cutting the cane. At last we reach Ponce (pōn'sā), the commercial center of this side of the island. It is a flat, Spanish built town of one and two storied houses, covered with stucco and painted in the brightest of colors. It lies about five miles from the harbor, where we can get ships that will take us to Haiti.

Before leaving, however, we spend some time making excursions by sea to the islets about Porto Rico, and

on pony back to different parts of the mainland. The chief islets are Vieques and Culebra, which we passed on our way from St. Thomas to San Juan; and the Caja de Muertos, or Chest of the Dead, off the south coast, and Mona Island near the west coast, both noted for their phosphate deposits. The only habitable island is Vieques.



Pineapples.

It is a mountain ridge twenty-one miles long and six miles wide. It has several sugar plantations along the coast, and its hills form excellent pastures.

Our trip over Porto Rico shows us that it is wonderfully rich. It produces all kinds of vegetables, and some parts of it are especially good for sugar, tobacco, and coffee. There are farms not far from Ponce which raise enor-



Gathering cocoanuts.

mous pineapples. Along the coast are millions of cocoanut trees, and farther back are pastures, upon which feed the finest of cattle. The orange trees do not need irrigation, as in parts of California, and as for Jack Frost, who sometimes kills such trees in Florida, his name is unknown in this part of the world.

It is only three or four days by fast steamer from New York to San

Juan, and at some time in the future it may be that vegetables, pineapples, bananas, and oranges will be raised here in Porto Rico for our markets all over the Union.



55. HAITI, THE ISLAND OF THE TWO BLACK REPUBLICS

OUR next journey is to a country where most of the people are negroes or their descendants. It is the island of Haiti, comprising the two countries of Haiti and Santo Domingo, both of which have a republican form of government, with black presidents and other officials.

It takes us less than a day to steam from Ponce to the town of Santo Domingo, on the southern coast of the island. We sail westward, cross the Mona Passage, and are soon coasting along the shores of what appears to be a huge mass of mountains rising steeply from the water and jumbled together in all sorts of shapes. One of the early explorers on his return to England was asked by the king what Haiti was like. In reply he took a sheet of paper, crushed it up in his hands until it was a mass of wrinkles, and then threw it down upon the table. "Haiti is like that, your Majesty," said he, — "all mountains and valleys."

And so it is. The mountains run in four ranges from west to east, with valleys and plains between them. Their peaks are the highest of the West Indies. They are in fact the summits of the subterranean ridge which, extending above the water, forms the chief islands of this archipelago. With the glass we can see the highest mountain from our boat; it is Loma Tina, not far from Santo Domingo, almost two miles in height.

The mountains are not unlike those of Porto Rico, as we saw them from the sea, save that they are more rugged and grander. They are heavily wooded, with dense thickets of ferns on the summits. There are clouds resting upon them as we sail along the coast, and we can see fleecy masses of vapor nestling here and there in the green laps of the hills. It is on the mountain tops that the rainfall is heaviest, for there the air is coldest and it wrings the most water from the trade winds. These winds blow against the northern side of the island, and therefore that side has plenty of rain, while on the south side the lower slopes have not quite enough. There are many rivers,

however, and on the whole the island is fairly well watered.

Haiti is naturally rich. Sugar cane grows upon it, as well as anywhere in the West Indies; and coffee, tobacco, and cacao thrive on the slopes of the mountains. Its forests are especially fine, including mahogany, cedar, and dyewoods; and in the mountains there are rich deposits of iron, copper, and gold. All tropical fruits grow here as well as in Porto Rico, and the country might be a great garden if its people were as industrious as we are. Considering its natural resources, one would expect to find that the natives were exceedingly prosperous. They are just the reverse. Let us examine into their history and see if we can tell why.

Haiti was one of the first islands discovered by Columbus, and the very first to be colonized. When Columbus landed upon it in 1492, he described it as like the most beautiful provinces of Spain, and the Indians as excellent people. Speaking of it to the king and queen of Spain, he said:—

“ I swear to your Majesties there is not in the world a better land nor a better people. They love their neighbors as themselves, and their discourse is ever sweet and gentle, each sentence accompanied with a smile. Although it is true that they are naked, yet their manners are decorous and praiseworthy.”

The next year after this some Spanish settlers came to the island and founded a colony. They at once began to oppress the natives and to enslave them. They forced them to work in the mines and on their plantations; and when the natives objected, they beat them or killed them. Colum-

bus estimated that there were a million natives in Haiti at the time of his landing, but the Spaniards treated them so badly that within less than fifty years they had all disappeared. After that Haiti was almost deserted. The plantations, which had been cultivated by the Indian slaves, were neglected, and the cattle, hogs, and dogs ran wild.

A little later the buccaneers, some bands of French pirates who had settled on the island of Tortuga, off the western end of Haiti, gradually came across and took possession of that part of the country, importing negro slaves to work their plantations. This was also done by the Spaniards in other parts of the island, and within a few years the most of the population was negro.

The western part of Haiti through these buccaneers became a French possession, and when, in the later part of the eighteenth century, the French people overthrew their kings in the great revolution, and established a republic, they declared that the slaves of Haiti should be free.

The French Republic of that time was overthrown by Napoleon Bonaparte, who made himself Emperor. Napoleon did not believe in freedom, and he ordered that the negroes of Haiti be brought back into slavery. They refused to submit, and fought for their liberty in a war which ended in the success of the negroes, and the establishment of a negro republic with negro officers, and with laws prohibiting any white man from owning land.

This was early in the last century, when the United States was still a young nation. Since that time the western part of Haiti has had frequent changes of government. It has had negro emperors, kings, and presidents, but no white rulers. It has had many revolutions,

but in recent years it has been a real republic, and so it is to-day.

The eastern part of the island, where we now are, remained under the government of Spain until a little before the middle of the last century. Slaves were also introduced here, but many of them married into the families of their masters and with the few Indians who were left, so that the population is now made up of negroes and of Spanish and Indian mulattoes.

In 1844 this part of the island became independent, and since then it has been a republic under the name of Santo Domingo. Each country has a form of government much like ours, with a congress and officials elected by the people. Each has its president, but the president of Santo Domingo is chosen by popular vote, while the president of Haiti is elected by Congress. In both countries the blacks own the lands and do most of the business.

But the capital of Santo Domingo lies just before us. We can see the spire of the cathedral reaching high above the wall surrounding the city. The town is like a city of the Middle Ages. It was planned by Columbus, and that very wall was built centuries ago as a defense.

We land, and with a mulatto guide who speaks English take a walk through the streets. How shabby and dirty everything is! The houses are of Spanish style, with immense doors and windows. They are close to the sidewalks, and we can look in as we go along the streets. Some are built around courts, so that they appear to have a garden inside the house. The walls are of the brightest colors, and the black and yellow people standing against them furnish splendid subjects for our cameras.

In the suburbs are mud huts thatched with straw or palm leaves, with poorly dressed men and women, and half-naked babies. There is little work going on, and all seem shiftless and lazy. There are negroes everywhere. We see them sitting on the sidewalks, on the doorsteps, and standing in groups here and there, smoking and chat-



Street in Santo Domingo.

ting. The language is Spanish. The people have the manners of Spain, and every one is very polite.

We visit the cathedral, where some of the family of Columbus are buried, and then go to the government offices. The officials tell us that the republic of Santo Domingo comprises about two thirds of the island. It has an area of eighteen thousand square miles, and just about as many people as St. Louis. There are no large cities, the chief town having only ten thousand inhabitants. This is

Santiago, situated in a rich valley north of the central part of the country, and connected with the harbor of Puerto Plata, the principal port on the north coast.

Leaving Santo Domingo by steamer, we make our way along the southern coast of the island to its western end, and turning north and then east, pass into the Gulf of Gonaïves (gō-nà-ēv') and come to anchor at Port au Prince, the capital of the Haitian Republic.

Port au Prince is much larger and more prosperous than the town of Santo Domingo. It has over seventy thousand people, and we can see from the many ships in the harbor that it has considerable trade. Haiti exports a great deal of coffee, sugar, and cotton. It produces everything raised in the tropics, and also some fruits of the temperate zone, such as peaches, strawberries, and blackberries.

As we go through the streets we meet but few whites. The chief merchants, lawyers, and doctors are colored. There are colored policemen, colored soldiers, and colored customs officials, all dressed in gay uniforms. The republic has about a million inhabitants, and of these, nine hundred thousand are of African descent.

How well dressed some of the black people are and how fine they look! The men are straight, tall, and well formed. They are polite, and we are surprised to observe that most of them speak only French. They speak it well, too. Many children of the better classes are sent to Paris to be educated, and French is the language of the schools. It is also used in the government offices and in the stores. The poorer people speak a mixture of French and the native language.

Port au Prince has wide streets which cross one another



"Along the road are cabins in which the poor people live."

at right angles. It has some stone and brick houses and many of wood. On the edge of the city are villas with palms and other trees about them, and in the town business buildings and large frame structures containing the government offices.

We take carriages for a drive out into the country. Our black coachman takes us rapidly through the dust up hill and down. We go by many small farms and now and then a large estate owned by a black. Along the road are cabins or shacks in which the poor people live; many of them are shiftless and live from hand to mouth.

In the far interior the people are ignorant and superstitious, and in the mountains some are said to be almost as barbarous as the savages of Central Africa. They believe in witches and spirits, and it is charged that they sometimes have human sacrifices.

56. JAMAICA

WE are still in a land of the blacks. Jamaica is a British possession, but its people are almost all negroes. It was discovered by Columbus about two years after he had first set foot upon these islands. It was settled by the Spaniards who held it for about a century and a half, when the British took possession of it by conquest. The Spaniards oppressed the Indians so that they all died off, and at the time the British came the island was almost deserted.

The British soon began to see the value of Jamaica for sugar, and they set out plantations, importing negro slaves by the thousands to work them. There were more than three hundred thousand slaves here at the beginning of the last century, at which time the slave trade was abolished, and after that the freed slaves and their children formed the most of the population. There are about three quarters of a million people in Jamaica, and of these all but thirty thousand are colored. There are fifteen thousand whites and also about fifteen thousand East Indians, who have been brought in to work upon the plantations.

Let us take a look at the map and see what a valuable position Jamaica has in the Caribbean Sea. It is just south of the Windward Passage between Cuba and Haiti, where almost all the ships going between the Panama Canal and Europe, and also between the Canal and our Atlantic states, must pass. The island has excellent harbors, and it is so situated that vessels can stop here on their way for coal and supplies.

The principal harbor is Port Royal, in front of Kingston, the capital, where we now are. The water is so deep here that the largest ocean steamers can call. There at our right is a ship bound for Boston with a cargo of oranges, bananas, and pineapples, and on the left one is coming in from England with goods for the natives. It will probably take back sugar, coffee, ginger, and other native products.

Jamaica is by no means small. It is larger than Porto Rico, and is the largest of the British possessions in this archipelago.

The island has great natural resources. It is mountainous, but the vegetation extends to the highest peaks, and there are many rich valleys and coastal plains devoted to sugar. Fine coffee is raised on the highlands, and tropical fruits are found almost everywhere. Fruit pays better than anything else, oranges, bananas, and pineapples being annually exported to the United States.

Jamaica has orchards of cacao, nutmeg, cinnamon, and allspice trees. The allspice is an evergreen tree, which grows to the height of thirty feet. It has berries about the size of a pea, each of which contains two round, dark brown seeds which taste like nutmegs, cinnamon, and cloves ground up together. The berries are picked green and dried in the sun, after which they look like black pepper. They are valuable for flavoring pickles, pastry, and cake.

Another export is ginger. This plant is grown in small patches. The roots are broken up and set out much like potatoes. They sprout rapidly, sending out stalks covered with leaves from one to three feet in height. When the stalks are withered, the new roots are full grown and ready

for digging. They are taken out, cleaned, and scalded in boiling water. After this they are spread out in the sun to dry and then packed up for export to our country and Europe. Ginger is valuable for medicine, for making preserves, and also for the gingerbread, cookies, and snaps we all like so much.

We enjoy our travels in Jamaica. Every one speaks English, and we can stop and talk to the colored boys



"We stay one day in Kingston."

and girls wherever we go. We stay one day in Kingston, taking a carriage and driving about the town. Many of its houses are of yellow brick, with stores on the ground floors and high steps leading to the second stories, where most of the people live. We drive out to the parade ground to watch the drill. The soldiers are fine-looking colored men, wearing red turbans, white jackets, and blue trousers.

Like all English islands, Jamaica is well governed, and its larger cities have modern improvements. Kingston has electric lights and an electric railroad, and it is connected with all parts of the island by telegraph. Jamaica has one thousand government schools where children are taught free. It has short railroads and good country roads. We can go by carriage to any part of it, and on horseback to the very tops of the mountains.

One of our pleasantest experiences is such an excursion. We leave Kingston and ride through sugar plantations, past many small farms including fields of bananas and coffee, and then climb up the hills into the clouds. The higher summits of the Blue Mountains are always veiled in clouds. There are little clouds on their sides through which we sometimes ride, coming out to find the sun shining brightly on the upper side.

The views are magnificent. As we ascend we can see the Caribbean Sea far below us, with the ocean steamers going in and out of Port Royal apparently no larger than canoes. The buildings of Kingston now look like toys, and the little farm huts are mere spots on the landscape.

The vegetation changes as we go upward. In the lowlands are groves of cocoanut palms, higher up there are forests with many orchids and long hanging creepers, while on the top are fern beds and groves of tree ferns. At this altitude most mountains are barren, but here the moisture is so great that everything is the greenest of green.

Now we have descended the mountains and are again in the lowlands. We stop at a cabin made of mud with a thatched roof, and talk with the people. They are negroes as jolly and good-natured as our negroes at

home. The children bring oranges and bananas, and ask us to buy.

There are many women at work in the fields, and in some places we observe them breaking stones on the road. They seem to do more work than the men. They cut sugar cane, hoe corn, and carry great bundles.



"The women seem to do more work than the men."

As we return to the city we see many women bringing fruit and vegetables into Kingston on donkeys and on their heads. We visit the market to get a supply of fresh fruit before going on board. Here most of the peddlers are women, and it is a woman porter who carries our pineapples, bananas, and oranges to the ship. She puts the whole in a basket which she lifts to the top of her head and goes off on a trot. We follow behind, and in a short time are again on the steamer, ready for our voyage to Cuba.

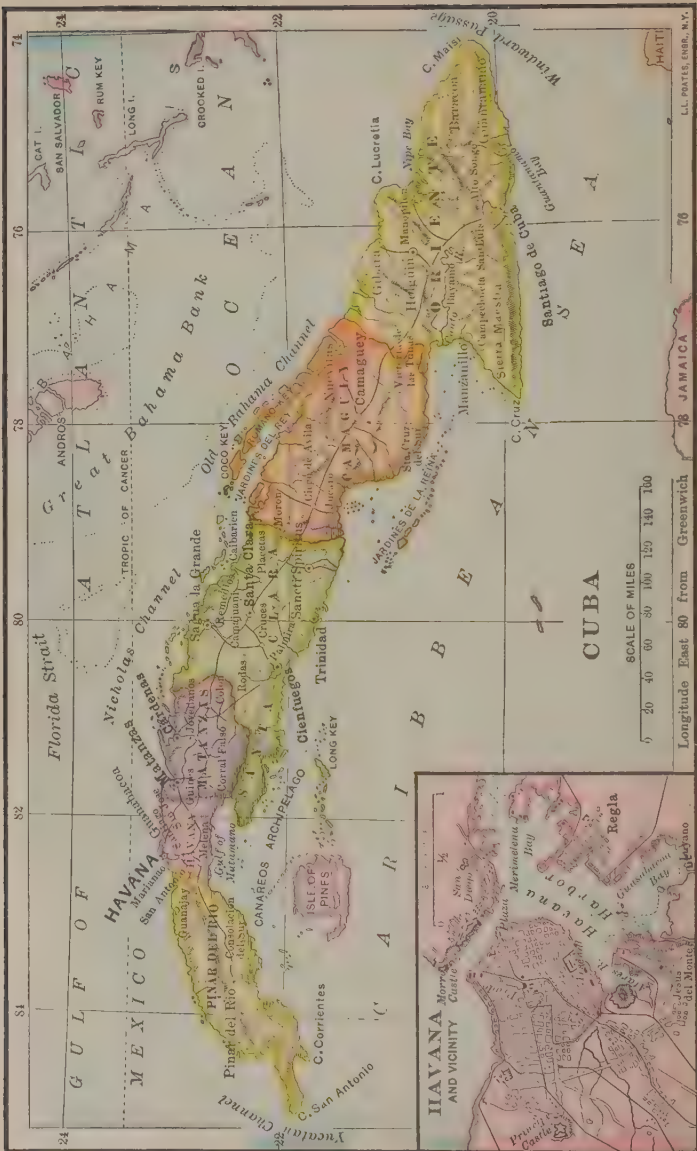
57. CUBA, THE PEARL OF THE ANTILLES

WE are now to visit the largest, richest, and most valuable island of the West Indies, an island which the Spaniards called "The Pearl of the Antilles," and one so important to us that we have to a certain extent taken it under our protection. This is Cuba, so situated that it commands the two entrances to the Gulf of Mexico by the Strait of Florida and the Yucatan Channel, and also the Windward Passage, which is the chief entrance from the Atlantic Ocean to the Caribbean Sea. If the entrances to the Gulf were shut off, it would disturb the commerce of our southern states and of the whole Mississippi valley, and the closing of the Windward Passage would be of great damage to our trade with South America and that which comes by way of the Isthmus of Panama.

Cuba is so important to the United States that in our treaty relations we have provided that the island shall never make any agreement with any foreign power which might endanger its independence, that it shall not incur foreign debts beyond what its current revenues can easily pay, and that it shall not do anything that might affect us or our trade.

We have also the right to establish naval stations on the island, and, on the whole, our relations with it are such that, although it is an independent republic, it is generally looked upon as a dependency of the United States, and many think that it will some day ask to be admitted to the Union.

Notice the shape of the island as it lies on the map.



The Spaniards compared it to a bird's tongue, with the root in the Caribbean Sea and the tip just licking the Yucatan Channel. How long and how narrow it is, and how winding its coast! If the coast line could be stretched out, it would be longer than the distance from Boston to San Francisco and back, and on every part of it there are excellent harbors, so that it is easy to export the products by sea.

Now look again at the map. Cuba is like a cornucopia, or horn of plenty, and this word just describes it. It is the most fertile of all the West Indies. It has no deserts, no barren hills, and only a few large swamps. Much of it is still wild, but almost the whole can be tilled. The eastern part is mountainous, but the mountains are green to



Cocoanut palms.

their tops, and they have valuable forests and minerals. The middle is made up of gently sloping plains, upon which are the largest and richest sugar fields of the world, and in the west are picturesque mountains with beautiful valleys, where is produced the finest tobacco known to man.

The whole island is covered with a luxuriant vegetation. It has more than three thousand native plants and millions

of acres of valuable forests. It has twenty-six varieties of palms, the finest of mahogany and dyewoods, and also trees bearing tropical fruits. There are flowers everywhere; and beautiful birds, including different varieties of parrots, are found in the woods. Is it any wonder that the Spaniards thought it a jewel?

Cuba was discovered by Columbus, and settled by the Spaniards. When Columbus first came, it had several hundred thousand Indians, ruled by nine independent chiefs. The Indians had slight forms and pleasant faces, and the explorers said they were a good people. They were gentle and friendly. They had huts as well built as those of the poorer Cubans of to-day, and near them little farms, where they cultivated cotton, pineapples, tobacco, manioc, and Indian corn. The Spaniards enslaved them, and treated them so cruelly that they soon disappeared.

After that, negro slaves were imported to take the place of the Indians, about a million negroes being brought over from Africa for this purpose. Then the slaves were freed, and they, with their descendants, form a large part of the population of the island to-day.

Cuba has now, all together, about a million and a half people, including whites, blacks, and mulattoes. The whites are mostly the descendants of the Spaniards. There are more of them than any of the others, and they form the ruling class, owning most of the land. They include emigrants from Spain and other parts of Southern Europe, and also Americans, Germans, English, and French. The blacks are the descendants of the slaves, and the mulattoes come from the negroes who have intermarried with the whites, and also with the Chinese who were brought in

years ago to work on the plantations. Many of the whites are wealthy and well educated. Some are graduates of the best of our colleges, and others have studied in Europe. Spanish is the language used everywhere; but many of the people speak English, as well, and we shall have no trouble in traveling about.



Sugar plantation.

We leave Port Royal in the morning, and shortly after dinner get our first sight of Cuba. There are cocoanut trees lining the shore, and behind them are great mountains, rolling one over the other, their tops in the clouds.

We make our way slowly along between Haiti and Cuba, sailing over the very spot where our fleet conquered that of Spain during the Spanish-American War, and staying for a few hours at Santiago.

We can see nothing of Santiago until we come into the

harbor. The channel is narrow, and we have to wind this way and that to get through. We cross the place where Hobson sank the *Merrimac*, go by Morro Castle, a great fort on a bluff at the right, and finally anchor in front of a city of white buildings, with roofs of red tiles, backed by smoky blue mountains. It is Santiago, the chief city of eastern Cuba.

The buildings are small and of the Spanish style, making us think of Madeira. They are usually of one or two stories, close to the street, with walls painted in all the colors of the rainbow. Many of them have large windows, with iron bars, so that they look much like prisons. They have heavy barred doors.

We shop awhile at the stores, and then return to the wharves, where we watch the ships taking on copper and iron ore from the mountains near by. The ore is brought by train and boat to Santiago, and thence exported to the United States and Europe.

We are still looking on when the steamer whistles its warning to leave. We hurry on board, and soon find ourselves out at sea, some distance from land. We sail for a time in a northeasterly direction, and then, rounding Cape Maisi, turn to the northwest and steam along until at last we come to the port of Havana.



58. HAVANA

WE are in Havana, a city of three hundred thousand people, situated on a plain about a beautiful harbor. It is the capital of Cuba, and the largest city of the

West Indies. How gay everything is! The tropical sun beats down upon the bright-colored houses. Its rays are dancing on the roofs of red tiles, and on walls of red, sky-blue, rose-pink, and cream-yellow, dazzling our eyes and making us think of a kaleidoscope rather than a great business city.



Street scene, Havana.

We land and make our way through one narrow street after another. We go through the Prado, in the center of which is a wide promenade with two rows of trees on each side, where the people walk in the cool of the evening. Here and there are squares or plazas filled with trees, with seats under them, on which people are sitting. We pass many fine buildings, including the government palace, the cathedral, the theater, and the large hotels.

The most of the buildings are low, one-storied structures, although in the best business and residence sections we find

some of two and three stories. The houses are made of great blocks of stone covered with stucco. They have enormous doors and windows, some so barred with iron that the people behind them appear to be looking out of a prison. They are of the Spanish order: each house built around a court or patio, which contains plants and flowers, and sometimes a fountain. It is in the patios that the people sit and chat in the cool of the evening. The rooms are large and the ceilings high; the floors are of marble, bricks, or porcelain tiles. It is so warm in Havana that great care is taken to keep cool.

We spend some time in the stores. They open out on the street, the whole front in some cases being taken away during the daytime, so that they remind us of the bazaars we saw in the far eastern islands. There are but few large establishments such as we have at home, although many stores which look small have warehouses behind, packed with fine goods.

Only a few of us speak Spanish, and although there are many Americans in Havana, it is necessary to have an interpreter to make ourselves understood. The Cubans are polite, and the moment they learn we are Americans, they are more polite than ever, for they look upon us as their brothers and sisters. The United States buys far more of their products than any other country, and in return the Cubans purchase from us much of their food, clothing, machinery, farm tools, and other things.

Most of our explorations are in the morning and evening, for we adopt Cuban customs during our stay. For instance, it would be foolish to try to do business at noon, for at that time the stores and business places are shut. The Cubans

take only a cup of coffee, a roll, and perhaps some fruit upon rising; they do not have a substantial breakfast until about eleven o'clock, after which they enjoy a nap or a chat with their friends, not returning to work until one o'clock, or possibly later. Their dinners are much like ours, and are served in the evening when the day's work is over. After dinner they walk or drive out, or stay at home with their families, sitting on the balconies or in the patios, enjoying the air.

We have friends in Havana, and through them meet some of the better class people. Their homes are beautifully furnished, and quite as comfortable as our own. Our friends speak Spanish, English, and French, and through them we learn that many Cubans are sent to the United States or Europe to be educated. This is so, notwithstanding there are now good schools in Havana, and common schools almost everywhere throughout Cuba, a large number having been established since the Spanish-American War. Havana has colleges and a university, and it has girls' schools of all kinds. Many of the lower classes are still very ignorant, and comparatively few can read and write. They are improving, however; and now that they are free, their condition will grow better and better.

We enjoy our strolls about the city by moonlight. There are thousands in the plazas, on the streets, and in the cafés. There are gay carriages, and men upon horseback. The Cubans are fond of music, and we hear pianos, guitars, and singing almost everywhere.

On Sunday we go to the cathedral. The women present are dressed in black, with black lace shawls called mantillas wrapped around their heads and falling down over the

shoulders. Black is the color used by the women of the better classes on the streets, although they wear all sorts of gay colors at home.

We spend one morning in the market, and find it crowded with all sorts of people, buying and selling. There are a thousand different stalls, and many thousand customers. We count eighty different kinds of game, twenty varieties of potatoes, and sweet potatoes, and then go on to the tropical fruits, which are sold in large quantities. We buy a ripe pineapple for five cents, eat bananas which almost melt in our mouths, and orange after orange until we can not eat more. We have tasted Cuban oranges before and have learned to eat them as the Cubans do. We find them for sale on every street corner, and the peddler fixes the fruit for us. He pares off the skin with a sharp knife much as we pare an apple, taking off every white particle and just breaking the little globules within. He then sticks a fork into the orange and hands it to us. We suck out the juice, rolling the oranges around as we do so. This is the way our oranges are served with every breakfast. We like it so well we shall advise our friends to try it at home.

Before leaving Havana we visit the President and Vice President, and also the Senate and House of Representatives. Cuba is now a republic. The country is divided into six provinces or states, and its people elect their own officers. We learn that it is far better off than it was under the Spaniards. The cities are cleaner and more healthful. New railroads are being built. The wild lands are being reclaimed, and the people are improving in civilization and wealth.

59. ON THE SUGAR AND TOBACCO
PLANTATIONS

WE have left Havana and are slowly making our way through some of the country districts of Cuba. We have visited all the large cities. We have stayed awhile at Mantanzas and Cardenas, important sugar ports on the north coast, east of Havana, and crossed the island to the great sugar market at Cienfuegos (sē-ĕn-fwā'gōs) on the south. We rested awhile at Santa Clara, a thriving town on the central plain, and are now going back to Havana.

What a beautiful island this is, and how rich the soil! Outside Havana we saw acres of pineapples, the great red balls sprouting out of the earth, surrounded by long, prickly green leaves. We have ridden through fields of banana trees loaded with fruit, and everywhere we go there are great palms standing out alone on the landscape, or forming the avenues to some rich planter's house. Cuba has twenty-six varieties of palm trees, including the royal palm, the most beautiful known to man, and the cocoanut palm, whose green nuts give us a drink every time we ride through the country. There are pastures on which fat cattle are feeding, and many sugar plantations.

Central Cuba is little more than a vast sugar estate divided up into large and small farms. Here they are plowing the fields with machine plows, and there the same work is done by oxen which pull the plows along by yokes attached to their horns. There are thousands of colored people at work. We see them planting the

cane, just as in Hawaii and Java, but are told that the soil is so rich here that the planting need be done only once every five or six years ; and that if the cane be properly cut, a new crop will sprout out from the old stalks even longer.

Cuba is said to have better sugar soil than any other country. The land is not fertilized, but nevertheless it yields more cane sugar than any other island, and, at times, produces as much as two billion pounds in one year. Sugar cane was introduced about twenty-five years after the landing of Columbus, and Cuba has had sugar plantations from that time to this.

Many of the sugar estates are owned by wealthy men, who employ large capital to run them. Some have mills which grind a thousand tons of cane in twenty-four hours, and some estates have railroads upon them to carry the cane from the fields to the factory. Some have so many laborers that the houses on one estate form a little town. We see many women among the workers. They are planting, hoeing, and cutting the cane ; the overseers tell us they work quite as well as the men. Some plantations have nurseries, where the babies and little children are watched over by the old women, while their mothers are at work in the fields.

Cuba grows better tobacco than any other country of the world. This plant will thrive in any part of the island, but the best varieties are raised in the mountainous province of Pinar del Rio (pē-nār' dēl rē'ō), west of Havana, where there is a strip of land about eighty miles long and twenty miles wide which produces the finest tobacco of the world. It is so fine that it commands very high prices, the choicest leaves bringing as much as four dollars a pound.



Tobacco field.

Tobacco is usually raised on small farms, for it requires great care and labor. The plants are grown in beds, from seeds so small that you could hold more than a thousand of them in one hand. The seeds are sown in September, and in six or seven weeks the plants are about eight inches high and ready to be set out. This work must be done with great care, and by hand. After this they are well cultivated, and are pruned with the thumb nail, as this is less liable to injure them than a knife. About January they are almost ripe. They have grown as tall as a man, and their dark green leaves are turning yellow.

The stalks are now cut into sections of two leaves each, and the sections are hung on poles and carried to the drying sheds, where they remain until properly cured. After this the leaves are fermented and then made up

into bundles. The bundles are packed up in bales of one hundred ten pounds each, and are thus shipped to all parts of the world. About eighty thousand people are employed in cultivating Cuban tobacco, and in the factories of Havana and other cities a vast number are engaged in manufacturing it into cigars and cigarettes. The crop amounts to many million dollars a year.



60. THE BAHAMAS AND THE BERMUDAS

WE sail from Havana to the northeast, going so close to Florida that we can see the coast with our glasses. The air is warm, and the water is warmer than the air, for we are traveling through the Gulf Stream, that warm ocean current which flows between banks of cold water through the straits of Florida along our Atlantic coast. There is much seaweed floating in it, and we try in vain to catch some by throwing lines out at the stern of our steamer.

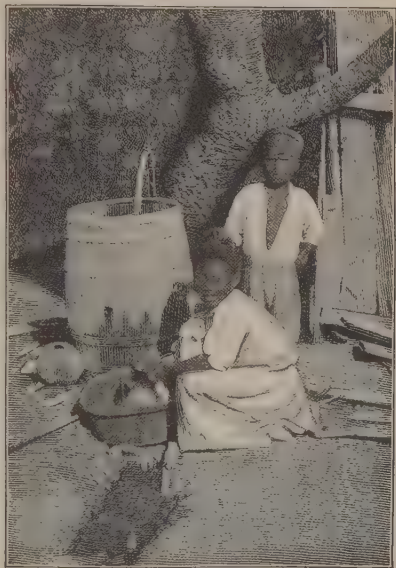
How blue the water is, and how beautiful! It is smooth most of the time, and our ship cuts its way through it, leaving a long track behind. Now we are approaching the Bahamas, a group of many little coral islands belonging to Great Britain. They have all together an area about the size of Connecticut, and a population of only a few thousand souls. It was upon one of them, San Salvador, that Columbus landed when he discovered the new world.

We pass the green island of Andros and a little later see the palm trees of New Providence rising above the

white buildings on the harbor of Nassau. Andros is the largest of the Bahamas, but New Providence is the most important, Nassau being the capital.

We land and stroll about the town, admiring its cozy houses and beautiful gardens. Most of the people we meet are blacks and mulattoes, although there are some whites, including many English and Americans who have come here for their health on account of the climate.

We find the hotel comfortable, and after a good dinner take carriages for a drive over the island. We visit the Queen's Staircase, a flight of huge steps cut out of the solid rock from one of the forts down to the beach, and



Bahama children.

in the evening take a ride on the "Lake of Fire," not far from the city. We have all seen lightning bugs fly through the air. In this lake there are many little organisms which might be called the lightning bugs of the sea, for they seem to coat the water with fire. At times, when the lake is quiet, there is no light whatever; but at others, when it is moving, these little organisms emit light just like the lightning bug, and the water seems to be flaming. As our

boat moves, it leaves a trail of fire, and when a boatman dives down into the water, he is apparently outlined in flames.

Much of our stay in the Bahamas is spent upon the sea. The water is exceedingly clear, and boats with bottoms of plate glass have been constructed so that we can look down from them and observe the fishes swimming about.



Sorting sponges.

We also see great sponges lying here and there on the rocks. Off the Bahamas are the best sponge fishing grounds of the world, as much as a million pounds of sponges being gathered in a single year. The sponges are obtained by divers, or by fishing for them with a hook attached to a pole. The fishermen have buckets with glass bottoms. By putting such a bucket into the water and looking into it, they can see clear to the bottom, no

matter if the water be rough. When they spy a good sponge, they thrust down their poles, catch it with a hook, and pull it up. When the sponge first comes out, it is black and sticky, and full of animal life. It is left in the sun until the little organisms which have made it are dead, — which is in a short time, — and it is then cleaned,



"The salt is hoed and shoveled into carts."

bleached, and dried for export. Sponges are trimmed and sorted before they are sold. They are pressed into bales and shipped to all parts of the world.

Another industry of the Bahamas, including the Turks and Caicos (kī'kōs) Islands at the eastern end of the group, is salt making. The sea water is admitted to lagoons or beds, so made that the sea can be shut out from them. After the lagoons are full the openings are closed, when the hot sun soon evaporates the water, leaving the salt

lying upon the ground. There is so much produced in this way that it is gathered up for shipment to different parts of the world. The salt is hoed and shoveled into carts by negroes, and carried to the ports.

Leaving the Bahamas we next call at the Bermudas, a group of islands somewhat similar to the Bahamas, lying north of the West Indies, in about the same latitude as Charleston, South Carolina. They also belong to England, and are of great importance as a naval and coaling station. The English have men-of-war here ready to start out to defend their possessions, and they also have docks and other conveniences for the repair of their navy. There is a garrison of English soldiers on the island.

The Bermudas are of coral formation, but the soil upon them is so rich and the climate so mild that all sorts of flowers grow luxuriantly. Geraniums bloom all the year round, and one can have roses from Christmas to Christmas. There are oleanders everywhere, some so tall that hedges are made of them. One of the great crops of the island is lilies, which are grown both for their bulbs and for flowers. At Easter time many of the flowers are shipped to New York, and later on the bulbs are dug up and exported. Bermuda also sends us onions and early potatoes; and as these things can be raised here when it is still winter in the United States, they bring high prices.

We stay a day or so at Hamilton, the capital of the Bermudas, awaiting a steamer to take us back to our homes. We call upon the governor, visit the parade grounds where the soldiers are drilling, and then ride about on our bicycles, looking at one little flower farm after another, but all the while longing for the time of our sailing to come.

At last the hour arrives, and we go on board. Our steamer is turned to the northwest. We have a few days' pleasant sailing when we sight Sandy Hook, and a little later on find ourselves landed in New York on our own dear American soil.



61. THE ISLANDS OF ICE AND SNOW

THERE are some important islands which we have passed by in our long journey around the world, because they are already described in other books of this series. We have been forced to omit other unimportant ones on account of their small commercial or industrial value, or because they were so far out of the line of our travels.

The British Isles we visited while we were traveling in Europe. The Japanese archipelago and Hongkong we saw when in Asia, Tierra del Fuego (tē-ēr'rá dēl fwā'gō) was explored during our tour of the Grand Division of South America, and the seal islands of Alaska, Vancouver, and the fishing banks of Newfoundland we learned about in our journeys in North America.

Among other interesting islands are these of the great archipelago about the North Pole. These islands belong to various countries, but chiefly to Great Britain, Russia, and Denmark. They are in the far north, vast wastes of ice and snow with icebergs floating about them and with glaciers extending out into the sea. They are in the region of long days and long nights, where, for some months, the sun never sets, and where for other months it

is dark all the day through. These islands are inhabited by Eskimos and other half-savage people of the same nature, who dress in furs and live by hunting and fishing, having rude huts built of stone, or blocks of ice and snow. They have no domestic animals, but dogs and reindeer. There are many such tribes, each having its own customs, but all more or less alike.

The most important of these islands are Greenland and Iceland, which belong chiefly to Denmark. Greenland is by far the largest island on the globe. It is about one sixth the size of the United States without Alaska and our outlying colonies, and more than three fourths of it is covered with an enormous bed of ice many feet thick. The icy bed is so large that if it could be lifted up and spread over our country, it would cover all of our Atlantic states with the exception of Georgia and Florida. The ice ends in glaciers at the shores, or some distance back from them. In the interior it covers mountains and valleys, although some of the mountains are more than two miles in height.

Here and there the ocean runs far into the land, and at places glaciers or frozen rivers move slowly down to the water, breaking off from time to time in great masses with a noise like thunder. It is said that more than a billion tons of ice drop from the shores of Greenland into the sea every year.

This vast country is sparsely populated. It has all together only several hundred Danes and about ten thousand Eskimos. The Danes govern the island. They have little trading places along the coast where they bring wheat, coffee, sugar, and tobacco; and exchange them with the



Eskimo children.

natives for furs, sealskins, dried fish, and the down of the eider duck. Some of them have little gardens where they raise lettuce, cabbages, and radishes in the few summer months.

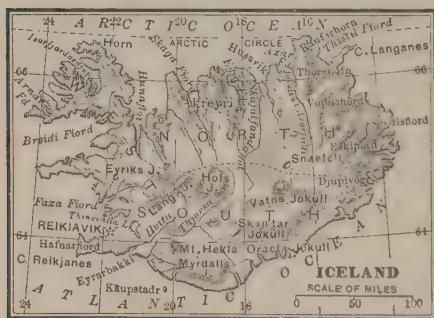
The Eskimos usually live near the shore. They have little huts of stone or turf and, in the winter, of snow and ice blocks. They are hunters and fishers, catching seal and walrus, the latter animal furnishing a great part of their food. They net ducks and other birds, and sometimes kill musk oxen and even polar bears. They drink melted snow water, and do much of their cooking in a rude way, with fish oil and blubber. They rely chiefly upon their clothing to keep warm, sleeping in fur bags at night.

The men and the women have much the same dress, both wearing stockings and trousers of sealskin, with the

fur turned inward, and also skin stockings and boots. The men have jackets and hoods of fur, and the women sometimes have pouches or pockets sewed to the back of their garments; in these the babies are carried until they are old enough to walk.

The Eskimos make boats of driftwood, covered with sealskin, and also sleds formed of bone, wood, and skin, in which they travel over the frozen ice, drawn by dogs. They are all together of a low grade of civilization, and of not much importance in the work of the world.

Iceland is not so cold as Greenland, although it lies only a short distance to the eastward; for its climate is tem-



pered by the warm winds from the ocean. It is not uninhabitable, and it has woods of stunted beech, and pastures upon which cattle thrive. There are many farms which support sheep, and

others on which hardy horses are reared.

Iceland is about the size of Ohio. It is very mountainous, and it has enormous volcanoes which have thrown out so much lava that they have covered about one tenth of its surface. There are all together more than one hundred volcanoes and many hot springs, notwithstanding that the country is so far north, and that it has great glaciers and vast fields of snow.

We are especially interested in Iceland, because it was

one of the homes of the Norsemen, a people who, it is claimed, discovered America almost five hundred years before Columbus made his first voyage across the Atlantic. The country is now ruled by Denmark, and is peopled largely by Danes. Most of the natives live by rearing cattle and sheep, and by fishing. The capital is Reikiavik (rí/kě-â-vík), a thriving little city on the west coast. Here the governor general lives, and here the little parliament which makes the laws has its sitting. Reikiavik has good schools, a national library, and a museum.

Not far from Iceland are the Faroe Islands, twenty-four in number, inhabited by people similar to the Icelanders, who devote themselves to sheep rearing and fishing. Not very far away from the Faroes are the Shetland Islands, noted for their beautiful ponies; and nearer Scotland are the Órkneys and Hebrides, belonging to that country.

Farther northeast of Greenland, and inside the Arctic Circle, are Spitzbergen, Franz Josef Land, and, nearer the Russian and Siberian coast, Nova Zembla, the New Siberia Islands, and others.

Most of the latter islands have no permanent inhabitants, but they are visited by hunters from Siberia, who cross over with their reindeer to take advantage of the short grass, moss, and other kinds of stunted vegetation found there. They also go to hunt the bears, foxes, and other animals which live on the islands.

Passing on eastward and going through the Bering Strait, we find some large islands lying between Asia and North America. The Alaskan archipelago has many islands and islets; the Aleutian chain and the Kuril Islands, which are largely volcanic, are of considerable

extent, and the great island of Sakhalin (sǎ-kâ-lyēn'), off the east coast of Siberia, is six hundred miles long, and at one place more than one hundred miles wide. This island has valuable coal beds, oil fields, and gold mines. It has luxuriant forests, a climate in which grains and potatoes will grow, and the waters surrounding it are so rich in fish that it is said the fisheries there will some day be the most important of the whole world.

Sakhalin is now largely a prison settlement of Russia, inhabited chiefly by the political exiles and convicts who have been sent there to work in the mines. It is a cold and dreary land, covered most of the time with fog, rain, or snow, and the condition of the prisoners is a sad one.



62. ISLANDS AROUND AND ABOUT SOUTH AMERICA

WE shall take one more trip before we close our explorations of the great island world. As we look over the globe we see that we have visited the waters about Australia, Europe, Asia, Africa, and North America, but have passed South America by.

South America has, however, but few island groups near it, and none of very great importance with the exception of the archipelago of Tierra del Fuego about its extreme southern end, which we visited during our journeys in South America.

There are a few islands, however, which are deserving of mention. The Galapagos Archipelago, lying on the

Equator almost directly west of Ecuador, is a little group especially noted for its large turtles, and the Guano Islands, farther south along the coast, are famous for the millions of birds which roost upon them and live and die there, making a valuable fertilizer, which is sent by the shipload to Europe and the United States.



"Millions of birds live and die there."

The Guano Islands are masses of volcanic rock rising out of the ocean opposite the great desert of western South America. The rain never washes them, and they are bare of everything green. The birds live on the fish of the waters about. Many of them are pelicans which have great bills with pouches under them, in which they scoop the fish up out of the water, eating until they can eat no more. They then climb upon these islands and lie about until they have digested their food. There are

also vast flocks of sea gulls and other birds which bring the fish they catch to the islands, and sometimes seals crawl up out of the water and die upon them.

This has gone on for ages, and, since there is little rain, a great mass of manure has accumulated, which is so valuable that it is mined and carried away in ships, bringing in to the people of Peru, to whom the islands belong, many millions of dollars.

South of the guano beds and farther west is an island belonging to Chile, which is especially interesting to us. It is known as Juan Fernandez (hōō-än' fěr-nän'dēth), and is the island upon which Alexander Selkirk, the sailor whose adventures inspired the story of Robinson Crusoe, was cast away. Selkirk had fallen out with the captain and mutinied, and he was given the choice of being hanged or left alone on this desert island. He declined the hanging, and was landed with a small supply of provisions. He lived all alone on the island for four years and four months, when an English war vessel, attracted by his watch fires, called and took him to England. While there he wrote the story of his adventures, and it is supposed that it was this story that suggested to Daniel Defoe the tale of Robinson Crusoe, although Defoe, having a better knowledge of the islands in the southern part of the Caribbean Sea, has made his story to correspond to them in its descriptions of scenery, products, and plants.

It is but a short distance from Juan Fernandez to Valparaiso, the chief port of Chile, and from there one can get ships which will take him down through the Strait of Magellan to the Falklands, about 250 miles east of the South American continent. These islands are farther south than



On the island of Juan Fernandez.

any other place we have visited in our tour ; but, owing to the warm ocean currents flowing by them, the grass is green all the year round. The islands all told have only about two thirds as much land as Massachusetts ; but they support hundreds of thousands of the finest sheep, and more than half a million dollars' worth of wool is exported every year.

The Falklands are about the windiest islands on the globe. The cold winds blow every day, and almost all day long. They blow so hard that not a tree can live, and the people say that potatoes are sometimes blown out of the ground. It is always cloudy there. The air is moist ; there are many swamps, and nature is dreary.

The Falklands are owned by Great Britain, and their people are nearly all Scotchmen. The capital, Port Stan-

ley, is a little town of seven hundred inhabitants, with English churches and schools, and cottages not unlike our own houses.

The shepherds live in little huts at wide distances from one another, so that a child has often to ride five or ten miles if he would have a game with his next-door neighbor. They are so far apart that they can not have schools like ours, so the government furnishes traveling schoolmasters who go from one shepherd's home to another to teach the children. The teacher stays with each family a fortnight, and then, having laid out a course of study, he goes on to the next family, which may live twenty miles away. After a time he gets back to his old pupils and examines them on what they have studied during his absence.

Below the latitude of the Falklands there are several small islands claimed by various countries, but none of commercial importance. With the exception of Tierra del Fuego, there is no other land so far from the Equator that has any value whatever. The Falklands are the farthest south of all commercial and industrial regions.

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